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Indiana Standard Third in World Power By Pan American Stock Purchase

By Roger B. Stafford
N. P. N. STAFF WRITER

CLEVELAND, June 20

THE Standard Oil Co. of Indiana has become at least the third power in the petroleum world considering extent of operations, petroleum reserves and other resources.

This has come about by the purchase last week of the controlling stock of the Pan American Eastern Petroleum Co., which owns a majority of the voting stock of the Pan American Petroleum & Transport Co. and in which Standard of Indiana has been the dominating spirit since control of the eastern and foreign oil properties of E. L. Doheny was purchased April 1, 1925. Terms of the purchase were not made known.

The resources of the Standard of Indiana-Pan American organization are surpassed only by the Standard Oil Co. of New Jersey and the Royal Dutch-Shell group. A deal for control of the Creole Syndicate by the controlled Lago Oil & Transport Co. which is reported to be pending but which will not be confirmed by Pan American Standard of Indiana officials, may place the organization directed by Col. Robert W. Stewart ahead of the Royal Dutch-Shell.

The control of the Pan American Eastern Petroleum Co. was bought from Blair & Co., Inc., New York, the banking company which has taken an active part in a great deal of oil industry financing and merging, and the Chase Securities Corp., which represents the Chase National bank, New York. The English interests headed by Lord Inverforth, managing director of the British Mexican Petroleum Co., which the Pan American Petroleum & Transport Co. bought, remain in the Pan American Eastern as a minority group.

The Standard of Indiana was regarded as the controlling factor in the purchase of the majority voting stock of Pan American Petroleum & Transport in 1925, but the extent of its investment was never revealed. Its report for 1925 showed an increase of only approximately $3,000,000 in its investment in other companies. This sum was pointed out by NATIONAL PETROLEUM NEWS last year as the probable extent of the Indiana company's investment, and the statement was never disputed.

ALTHOUGH the Standard of Indiana has had managerial control of the Pan American properties for more than two years, its acquisition of financial control consolidates it position. It has placed on the board of directors of the Pan American Eastern four of its own men; Beaumont Parks, vice-president of the Standard of Indiana in charge of refining; Edward J. Bullock, vice-president in charge of purchases; R. H. McElroy, vice-president in charge of transportation, and R. E. Humphreys an Indiana director who is in the Indiana company's refining department. Col. Stewart, John D. Clark, another vice-president, and Fred H. Wickett are also on the board. Only Elisha Walker of the Blair-Chase banking interests retains a seat and it is said his position is that of a counselor rather than a stock representative.

Fred H. Wickett, who has been chairman and president of the Pan American Petroleum & Transport Co. remains as chairman; but the presidency goes to Robert G. Stewart, son of the active head of the parent company. The younger Mr. Stewart entered service with the Standard of Indiana 15 years ago in the sales department.

The Pan American Eastern owns 501,000 of the approximately 1,000,000 outstanding voting shares of the Pan American Petroleum & Transport Co. The Pan American P. & T. stock in the hands of the public is largely class B and non-voting. Dec. 31, 1926, 2,353,955 of these $50 shares were outstanding. The number has been increased since by the exchange of these shares for those of the Lago Oil & Transport Corp. in which Pan American P. & T. owns 3,800,000 of the authorized 4,000,000 no par shares. The exchange was on a basis of three Lago for one Pan American.

The Lago is one of the most promising of the properties that now come under complete control of the Indiana company, because of its tremendous crude oil reserves in Venezuela.

The Lago Petroleum Corp., the operating subsidiary of the Lago Oil & Transport Corp., produced 6,093,548 barrels of crude last year, a gain of about 35 per cent over 1925 production. It has valuable, highly productive concessions along the shores and in the shallow water of Lake Maracaibo. Its production the last two years has been held down because of transportation difficulties.

IN HIS report for 1926, Mr. Wickett, who also is president of Lago, has 71 wells at the end of 1926 and from then until April 19, when the report was dated 22 more wells had been drilled. Since Nov. 1 production of the company has averaged about 30,-

000 barrels a day, Mr. Wickett reported, but with the completion of additional tankage, and the addition of six shallow draft tankers to the present fleet of nine on Lake Maracaibo, production may be doubled. Present tankage in the Venezuela fields and tankage under construction will give storage for 2,020,000 barrels and there will be 520,000 barrels of steel storage on the island of Aruba where Lago has its ocean terminal. Ocean going tankers draw too much water to enter Lake Maracaibo and only shallow draft vessels can take the oil from the field storage.

Potential production of the field April 19 was 75,000 barrels, Mr. Wickett said.

BESIDES the Lago properties the Standard of Indiana now has complete control over more than 1,500,000 acres of producing lands in Mexico, with production that exceeded 90,000 barrels a day last year. It has a large refinery at Tampico. It has the second largest privately owned oil fleet in the world, the large refinery at Destrahan, La., expanding marketing facilities in the eastern and southern states, the largest fuel oil business in the United States, Central and South America. The Pan American has storage facilities at principal ports on the Atlantic coast, to which it ships gasoline and other products by tanker and distributes inland by tank cars.

The Pan American's production last year totaled 34,714,000 barrels. The Indiana company did not publish the production figures of its subsidiaries, the Midwest Refining Co., which operated in the Rocky Mountain fields, and the Dixie Oil Co., which operates in the Mid-Continent. Standard of Indiana also owns half the $60,000,000 Sinclair Crude Purchasing Co., one of the large crude oil purchasing organizations in the Southwest. It also has a half interest in the $33,000,000 Sinclair Pipe Line Co., which has pipe lines from Lake Michigan to the Gulf of Mexico through the Mid-Continent with a branch to Wyoming.

The Indiana company has refining capacity in its skimming and cracking plants for about 250,000 barrels of charging stock a day. The Pan American at Destrahan, La., has capacity for 25,000 barrels and the topping plant at Tampico is rated at 140,000 barrels.

Combined assets of the Standard of Indiana and the Pan American Petroleum & Transport Co. as of Dec. 31, 1926, totaled $704,292,218, after deduction of depreciation and depletion reserves, which totaled $128,485,300. Assuming these reserves had been reinvested in the properties and maintenance was charged to current expense, it would indicate present physical values of the properties of the new group would be worth more than $800,000,000.

Combined capital of the two companies totaled $396,191,163. At the close of business June 20 this stock had a market value of $814,196,195.25, the 9,136,618½ outstanding $25 shares of Standard of Indiana stock selling at 67½, the 1,001,559 $50 voting shares of Pan American at 58½ and the 2,353,955 shares of class B nonvoting shares of Pan American at 59.

Standard of Indiana has no funded indebtedness. The Pan American at the end of 1926 had a bonded and mortgage indebtedness of $15,196,040.

It is understood there will be no financing in connection with the Indiana company's getting financial control of the Pan American. The Indiana company Dec. 31, 1926, had current assets of $161,994,682 of which $66,299,552 was in cash or its equivalent. Its current liabilities were only $27,696,604 or approximately 1 to 6 of current assets. The Pan American's current assets were $59,120,665 and current liabilities $20,845,800, or approximately 1 to 3 of current assets.

Current reports are that an offer may be made to exchange Pan American Petroleum & Transport stock for Standard of Indiana. It is doubtful that any reorganization would affect the names of Pan American operating subsidiaries to any extent, and surely the name "Standard" would not be adopted because the Pan American is competing with the Standard Oil Cos. of New Jersey, Kentucky. and Louisiana in the retail marketing field.

Derby Moves Offices

WICHITA, June 16.—The Derby Oil Co. has moved its general offices across the street to the first floor of the Derby apartment building at 354 North Lawrence. Formerly the offices were in a large residenee at 353 North Lawrence.

Coming Meetings

North Carolina Independent Oil Jobbers Association, O. Henry Hotel, Greensboro, N. C., June 28.

Michigan Independent Oil Men's Association, Mackinac Island, Mich., July 14, 15.

National Petroleum Association, Hotel Traymore, Atlantic City, N. J., Sept. 20, 21, 22.

Fourth International Petroleum Exposition and Congress, Tulsa, Sept. 24 to Oct. 1.

Petroleum Section, National Safety Council, Hotel Stevens, Chicago, Sept. 27 to 30.

American Petroleum Institute, Hotel Stevens, Chicago, Dec. 6, 7, 8.

Virginia Code of Ethics To Be Ready Soon

Staff Special

RICHMOND, Va., June 16.—Announcement of the code of ethics for ore marketing companies drafted by a committee of major company representatives, including the Standard Oil Co. of New Jersey, and the smaller Independents of Virginia, will be made at a hearing of the committee before some member of the Federal Trade Commission, at an early date yet to be selected.

The committee was appointed to draft the code following a hearing here May 25 of a complaint of smaller distributors of oil and gasoline against trade practices of some of the major companies. A tentative code was prepared by the committee but Allen G. Collins, a member of the Virginia Independent Oil Men's Association, told the association members at their convention here this week that nothing could be given out until the meeting with a trade commissioner.

MR. COLLINS said representatives of both large and small companies were working together harmoniously to eliminate secret rebates and other practices of which Independent oil men complain.

The committee working on the code consists of E. A. Holbein, New York, Standard Oil Co. of New Jersey; William Thompson, Norfolk, The Texas Co.; Senator T. Gray Haddon, Allen G. Collins and Overton D. Dennis, the last three being from Richmond.

J. K. Cunningham, one of the association's directors, spoke on "Virginia's Independent in the Oil Game." H. M. Ewing, National Petroleum Mutual Fire Insurance Co., Philadelphia, spoke about fire prevention, and A. M. Maxwell, Ethyl Gasoline Corp., New York, on antiknock motor fuels and ethyl gasoline.

W. A. Stokeley, who represents the Guarantee Liquid Measure Co. in Virginia, was elected sergeant-at-arms to succeed G. A. Turner who resigned. J. B. Belk, Albermarle Oil & Gas Co., Charlottesville, is president of the association. Other officers are: O. D. Dennis, first vice-president; P. S. Ford, second vice-president; S. G. Thomas, third vice-president, and W. M. Eller, secretary-treasurer and field representative.

The association was welcomed by both the mayor and the vice-president of the Richmond Chamber of Commerce. A banquet was served and the film "The World Struggle for Petroleum" was shown. Members voted to meet next in Norfolk late in September or early in October.

C. P. Dubbs Sues Universal Oil Products For $450,000 and Accounting

CHICAGO, June 21

C P. DUBBS, one of the inventors of the Dubbs cracking process, June 10, filed suit against the Universal Oil Products Co., owners of that process, to recover $450,000 which he claims is due him for 1924, 1925 and 1926 under a contract he has with the company.

The contract, according to Mr. Dubbs' petition, was entered into Oct. 25, 1919, and stipulated that the Universal was to pay him 15 per cent of its net earnings in consideration of his assigning a number of patents to the company. His percentage of earnings was to be paid him within 60 days after the end of each fiscal year.

An alternative to this arrangement, according to the petition, was that the company could give him 15 per cent of its stock, issued or to be issued and Dubbs was to give his full services to the company at $15,000 a year for two years beginning Jan. 1, 1920.

The suit was filed in federal district court in Chicago.

The petition states that $150,500 has been paid on account. The plaintiff charges, however, that the earnings of the company during the three years mentioned have been $4,000,000 and that at least $450,000 is due him. The petition asks the court to order an audit of the company's books and to ascertain the exact amount due him and give him a lien on the patents and moneys of the company.

The petition states that the Universal claims it has contracted to pay 10 per cent of the net earnings to attorneys for services rendered to the company and consequently Mr. Dubbs could receive no more than 15 per cent of 90 per cent of the earnings. The plaintiff charges that, some time in the present year, the bookkeeping system was altered, so that the net earnings are minimized and part of the earnings of the last three years were taken for the attorneys.

Plaintiff alleges also that the company claimed losses prior to 1924 on developing the Dubbs patents were chargeable against profits after 1924. The full extent of this, the plaintiff states, he does not know.

The petition enumerates 42 United States patents, two Mexican, one Canadian, one British and one Japanese patent that Mr. Dubbs claims he assigned to the Universal under the contract, as well as a patent and an application in the name of his father, in which he owned a half interest.

In the effort to establish the value of the Dubbs process and its position in the industry, the petition quotes a letter written by H. J. Halle, president of the Universal Oil Products Co. and published in NATIONAL PETROLEUM NEWS, Oct. 21, 1925. This letter contained a partial list of Dubbs licensees at that time, which comprised 36 American and 8 foreign companies.

Mr. Dubbs, called by telephone this morning, would say nothing further than was contained in the petition. He is still maintaining his headquarters in the Universal offices, "for the present" he said.

President Halle of the company was said to be out of the city. R. J. Dunham, vice president of the Universal, described the suit as "a friendly action to obtain legal interpretation of a profit sharing contract entered into in 1919."

The court gave the defendant 20 days in which to file an answer, which would make the latest date June 30 unless the time is extended. Mr. Dubbs, it was pointed out by Mr. Halle in the letter already referred to, was "born in oil" and was "fittingly christened Carbon Petroleum Dubbs."

Jesse A. Dubbs, the father of the plaintiff, was a pioneer in the refining field and to him was issued Patent No. 1,123,502, covering vaporization and condensation under autogenous pressure which is the subject of the suit between the Universal and the Standard Oil Co. of Indiana, according to Mr. Halle's statement.

Mr. Halle also referred to C. P. Dubbs as having "contributed prolifically to the development of the process which bears his name."

Illinois Gas Tax Bill is Finally Passed

By Telegraph

CHICAGO, June 21.—The Illinois Senate last night reconsidered the administration's two-cent gasoline tax bill and passed it, 30 to 19. It had already been passed by the house.

Proposal for reconsideration legally had to originate from the ranks of opponents of the bill, who succeeded in voting it down in the senate June 17, to the surprise of most of those interested. Senator Robert Owens, Chicago, colored, turned the trick for the administration in bringing the bill up for reconsideration.

The Illinois law will take about $13,000,000 annually from motorists, it is estimated. Half the net proceeds will go to the state for roads and half to the counties for the same purpose. The bill carried a 3 per cent allowance to the oil companies for shrinkage and collection costs.

Two other bills aimed at the oil industry which seemed to have a fair chance of passage, also died this week because they had not reached a second reading within the time limit. One was an inspection law and the other was popularly called the "500-foot bill" because it provided that no filling station could be built within 500 feet of a school.

The inspection bill amended the present oil inspection law, to allow counties to inspect flammable liquids. The plan was to have an oil inspector in every county. Some of them would have received as much as $5,000 a year. Cities are permitted to inspect oils and most of them have inspection.

Some Companies Meet 19 Cents in Ohio

CLEVELAND, June 21.—Pure Oil Co. and some local marketing companies, particularly in the southern part of Ohio, Saturday and Monday reduced their service station price of gasoline 2 cents to 19 cents, meeting the 19-cent price the Standard of Ohio Saturday established only at its bulk or railroad service stations. The Standard is selling at 21 cents, unchanged, at its regular service stations. Other companies in the northeastern part of the state are holding to 21 cents also. Cincinnati and Columbus are the largest towns affected.

California Stocks Reduced In May

LOS ANGELES, June 20.—California stocks of all petroleum products were reduced 1,051,581 barrels during May, according to American Petroleum Institute Stocks of heavy crude, including fuel, increased slightly more than 2,000,000 barrels, while refinable crude stocks were reduced slightly more than that amount. Gasoline stocks were drawn upon 963,189 barrels. Only 444 wells were drilling in the state at the end of May, against 503 at the end of April. Daily production declined 20,000 barrels in May compared with April.

Shell Co. of California Goes Ahead With Expansions

By William E. Green
N. P. N. STAFF WRITER

LOS ANGELES, June 17.

THAT the Shell Co. of California is laying plans for a very considerable enlargement of its business in California, is indicated by recent developments, which include the building of a refinery at Wilmington, near Los Angeles, now under construction; the laying of a natural gasoline pipe line from Ventura Avenue field to Los Angeles, a distance of about 100 miles, now operating; the completion of a pipe line serving the new Alamitos Heights end of Seal Beach field, to handle purchased crude; the closing of a contract during the past two weeks to purchase the crude production of the Honolulu Consolidated Oil Co., in Kern County, and preliminary surveys for a new pipe line to run the Honolulu oil from Buena Vista Hills to Coalinga to connect with the Shell's present line serving its Martinez refinery.

Up to first of this year, the Shell company had made no effort to purchase crude. But with construction work actually started on at its new refinery at Wilmington and with its export business showing considerable gains, it began looking for more crude.

The five-year contract to take the Honolulu Consolidated production in Buena Vista Hills in Kern County was closed recently, and arrangements were made with the Union Oil Co., to run the crude to Coalinga, where the Shell operates a 5000-barrel topping plant.

The Honolulu crude for several years has been bought by the Standard Oil Co., and the new contract and change in method of handling this oil, running around 10,000 barrels daily, came as a surprise to California oil men. Although the terms of the contract were not made public, it is generally considered that the Shell must have offered certain inducements to bring about the change.

The Shell also contracted to take the output of natural gasoline from the plant on the Honolulu lease, and producing around 10,000 gallons a day. The Standard had formerly handled this product also.

Although material contracts have not been let, it is generally understood that the proposed pipe line will be a combination 8-10-inch, to run from the Honolulu lease to Coalinga, about 70 miles, to connect with the Shell's line terminating at that point. The present line extends from Coalinga to the refinery at Martinez, 170 miles. It is also rumored that the Shell will run a lateral line to Poso Creek, where it has several shut-in wells, capable of making about 2000 barrels a day of gasoline content oil. Poso Creek is not yet served by a pipe line, and if this line is built, the Shell likely will buy the production of the other producers in that field.

At the time the Shell company built its 100-mile natural gasoline line from Ventura Avenue to Los Angeles, permits secured for the construction of a crude line, also, to parallel the natural gasoline line. It is thought the Shell eventually will build this line, and at the same time one from Kern county fields to Ventura to connect with the line running to Los Angeles, thus enabling it to bring production from the northern fields to its double refinery at Los Angeles.

The company has shut in about 14,000 barrels of daily production at Coalinga, and when the crude is needed the wells will be opened. With the new refinery completed at Los Angeles, and with conditions showing further improvement in the oil business, this production will be available.

The two Los Angeles refineries of the Shell by the end of the year will have a combined capacity of about 100,000 barrels, of which 10,000 barrels will be cracking. During the overproduction of crude, and low prices, most of the refineries in California with plans for betterment and enlargement, held them up and greatly curtailed their cracking operations.

The Shell Company has not held back, has continued to operate its cracking stills at Martinez. Instead of slowing up construction work at its new Los Angeles refinery, work has been speeded up.

As an example of the foreign demand for fuel oil faced by the Shell Co., during May, it contracted with Pan American and California Petroleum for more than 2,000,000 barrels of fuel oil over a period. The Shell is operating its three refineries at near capacity and apparently has not been able to make sufficient fuel oil to take care of its demands.

The Shell is also second in point gasoline gallonage in the state, according to tax figures.

Hughes May Counsel Gas Committee

NEW YORK, June 20.—While it has not been officially announced it is understood that Charles Evans Hughes will be retained as counsel by the gas conservative committee of the American Petroleum Institute, which will consider various ideas that have been suggested on conservation of gas and legislation, if any, pertaining thereto. Mr. Hughes acted in behalf of the institute in submitting statements to the Federal Oil Conservation Board a year ago.

Child with Toy Pistol Fires Bulk Plant

CLEVELAND, June 18.—The zeal of a nine-year-old boy to celebrate the Fourth of July several weeks ahead has cost the Rogers Oil Co., Lorain, O., $12,000, a great amount of inconvenience and the services of a tank truck driver for a few days.

The boy fired a toy pistol near a tank truck that was being filled with gasoline. The bulk plant of five 15,000-gallon vertical tanks, a truck, pump house and loading rack were destroyed. There was no insurance but the Rogers company is operating its retail stations and using bulk storage of the J. H. Michael Oil Co. at Amherst, O.

The boy was spending the day with the truck driver, L. H. Rogers, head of the company, said, and was beside the loading truck when he fired the toy pistol. The gasoline immediately flashed. The fire spread to the pump house, and then around the tanks. The tanks were equipped with automatic vents, Mr. Rogers said, but a tank of kerosene exploded and a gasket at the bottom of a tank of fuel oil melted and allowed the oil to feed the fire. The driver was burned about the hands and face and the boy about the hands.

About 45,000 gallons of gasoline, kerosene and fuel oil were burned.

I. O. M. A. Emblem to be On 1000 Tank Cars

CHICAGO, June 18.—L. V. Nicholas, president, Independent Oil Men of America, announced this week that Panhandle Refining Co., Wichita Falls, Texas, would soon join the I. O. M. A. The company has production, a refinery and their 25 filling stations in Texas.

Panhandle is the first integrated company to enter the I. O. M. A., but the third refiner in the last month. Vickers Petroleum Co., Wichita, Kans., was first and Kanotex Refining Co., Arkansas City, Kans., the second. In a few days all will be exhibiting the spread red eagle, the Association's emblem, on their tank cars, which total about 1,000, Mr. Nicholas said.

Wider Use of Standardized Equipment Next Step In A. P. I. Program

By Lawrence E. Smith and A. F. Hinton

N. P. N. STAFF WRITERS

THE third mid-year conference of the American Petroleum Institute committees on standardization of oil field equipment held here June 15, 16 and 17, marked the closing of the actual work of drawing specifications in the case of several committees, and the projecting ahead of general program to bring about greater use of the standardized equipment by the men in the oil fields.

Marked by several years of conscientious work by the voluntary committeemen recruited from the oil industry and the suppliers of oil field equipment, the standardization program may be said to be accomplished, so far as the broad principles go. There is still much to do in alteration of minor details and the work will continue to go on, the committees to remain in existence and regular conferences held.

Now, the reports on performace of A.P.I. standard equipment are coming in. Users are now in position to tell how it performs. It is natural that some changes should be requested and when they are, the appropriate committee takes notice of the request. Then changing conditions in the producing industry call for new classes of equipment not contemplated at the time specifications were originally adopted, an additional reason for holding the committees together.

An example of the latter class came up in the committee on pumping equipment. Since specifications on tubular goods were adopted, the air and gas lift became a new tool for the producing industry. Latest practice is to use different sizes of tubing in one string for this work, forming in effect, a tapered string bottom to top. Three sizes additional were desired. The work was undertaken by the pumping equipment committee and the new specifications added, thus assuring standardization of the special tubing string.

THE Colorado Springs meeting this year was characterized by the same diligent effort that has been put forth at previous meetings. While the usual amount of golf was played by the 232 standardization committeemen and visitors and the mountain trips were made by many. These diversions, however, were subordinated to the main show. It was nothing unusual for a committee or a sub-committee to work 12 to 15 hours, pausing only at mealtime. Night sessions were the rule and not the exception.

Left to right, J. Edgar Pew, Sun Oil Co., Dallas, chairman, Committee of Directors of the A. P. I. on Standardization, and E. W. Clark, executive vice-president, Union Oil Co. of California, and president of the American Petroleum Institute.

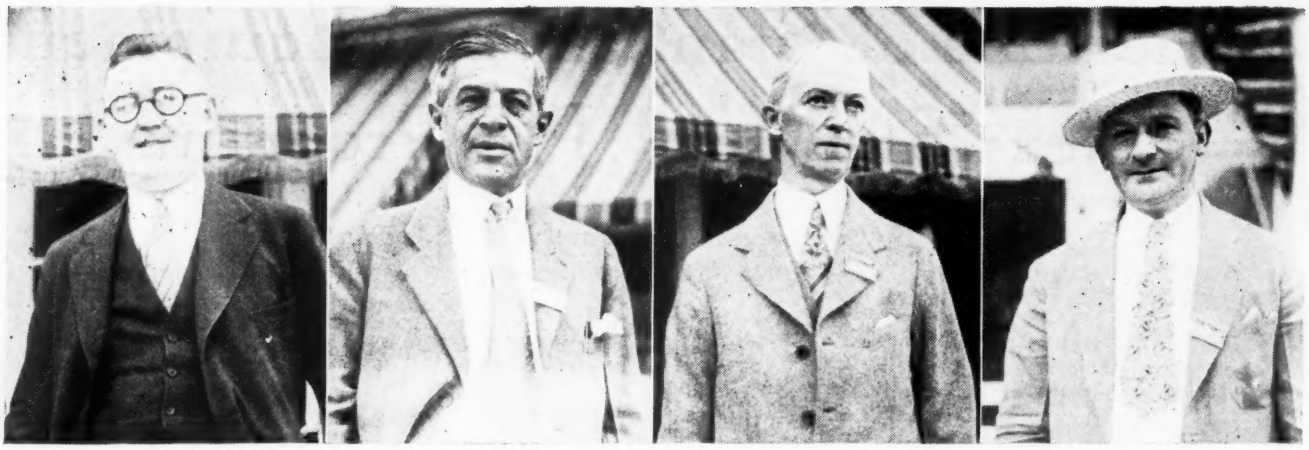
T. E. Swigart, Shell Co. of California, Los Angeles, national chairman of the committee on standardization of pumping equipment and engines.

The best tribute to the zeal displayed by producers and manufacturers on these committees was that expressed by J. Edgar Pew, chairman of the general A. P. I. committee on standardization. He said:

"NO ONE could view these commitees in action without being impressed with their sincerity of purpose and desire to serve the industry."

More and more it is apparent that the mid-year meeting is to be widened in scope and probably, in time, to cover as many phases of discussion as the main annual A. P. I. meeting now covers. This year, there were two points of difference between this and other mid-year meetings, which have been devoted exclusively to the standardization work. These were the address of President E. W. Clark, of the Institute, and the meetings held by the temporary committee on corrosion. The high lights in the address of President Clark, calling attention to the danger of a general world-wide surplus of crude production, were published in the June 15th issue of NATIONAL PETROLEUM NEWS.

The principal achievements of the



M. T. Archer, chief engineer, National Supply Co., Toledo, O.

Harry W. Bishop, jr., Harrisburg Pipe & Pipe Bending Co., Harrisburg, Pa.

C. T. Mapes, manager 21st St. Works, Oil Well Supply Co., Pittsburgh, Pa.

R. L. Fesmyer, wire line inspector and tool superintendent, Gypsy Oil Co., Tulsa.

standardization committee is told in the summaries that follow:

Pumping Equipment and Engines

PROBABLY no other phase of the standardization work is of greater general interest than that pertaining to pumping equipment and engines, because the problems are common to all fields. The committee on this work, now headed by T. E. Swigart, petroleum production engineer for the Shell Co. of California since the resignation of W. L. McLaine, General Petroleum Corp., held numerous and long sessions at Colorado Springs and came forth with much completed work.

They added an optional dimension of 1⅝-inch to the existing 1-inch dimension for wrench square on couplings for double pin sucker rods.

Former gaging system for sucker rods which gaged for maximum thread and cone of pin and maximum thread and cone of box was set aside. This method gave interchangeability without checking fit. A more complete gaging system was adopted which insures that the product will be within maximum and minimum dimensions specified by the committee.

Working barrel specifications were changed only in minor detail.

Compromise was reached between eastern and western practice and a single schedule drafted for dimensions of oil well pump parts. Eastern practice was adopted for 2-inch pumps and western practice for other sizes. Dimensional standards for two sizes of polished rods were adopted. Two diameters, 1½ and 1¼-inch were adopted and three optional lengths approved, 10, 11 and 20 feet. Rods may be double pin or box and pin and threads are to be standard A.P.I. sucker rod threads. The specifications call for ⅝ or ¾-inch rod thread on the 1⅛-inch rod size and ¾ or ⅞-inch threads on the 1½-inch size.

A new question was brought in by the use of air and gas lift for flowing wells in the Mid-Continent fields in that the need for 3½-inch plain, 3½-inch and 4-inch upset tubing had appeared. Standards for these sizes were adopted, so that these sizes of tubing would be standard and interchangeable. The joints were designed to be in proportion to other tubing joints. The general dimensions of these tubing sizes are as follows:

Size	Wt. per ft. with coupling	Threads per inch	Collar length
3½-in. plain	9,500 lb.	10	6
3½-in. upset	11,000 lb.	10	6¼
4-in. upset	12,750 lb.	10	6½

The committee got into the subject of standard sizes for pressure gage taps and fittings at well heads. Several sizes and kinds of fittings are now supplied on pressure gages and because they are needed on hurry-up jobs at points where bushings are seldom available, the committee made the following recommendations:

1—All taps and pressure gage connections at well heads to be ½-inch standard pipe size.

2—Pressure gages to be fitted with bushings to give ½-inch male pipe connection before being delivered by the storehouse to the field.

3—All gages to be fitted with valve or stop cock immediately under the gage before being delivered by storehouse to field.

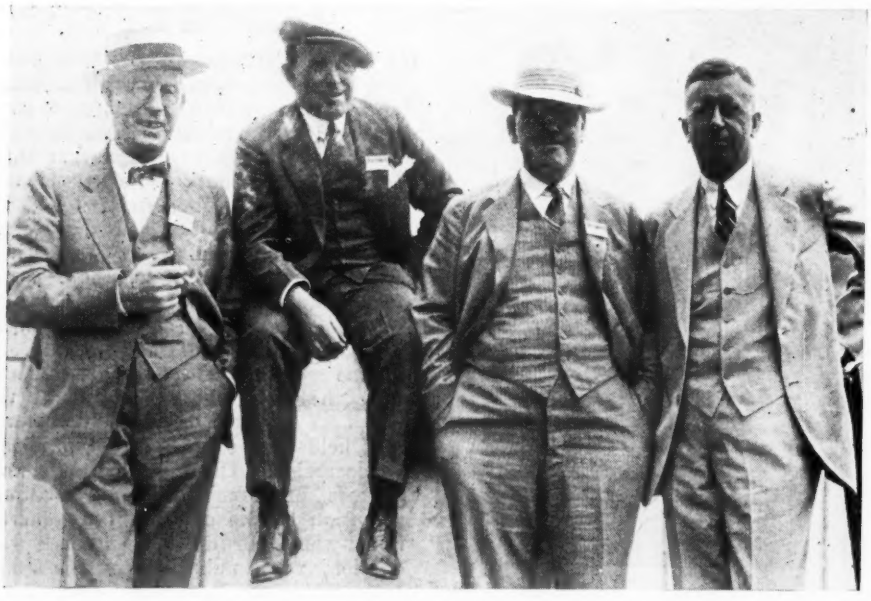
The committee, at the request of the committee on standardization of rigs and derricks, made recommendations on distances between prime movers and band wheels, as follows:

Between motor shaft and counter shaft on belted pumping units, to be approximately 12 feet.

Between counter shafts and band wheel shafts on pumping units to be approximately 32 feet.

Between reduction gear shafts and band wheel shafts on reduction gear chain driven units to be 16 feet.

The committee has now turned its attention to the development of new



Left to right, W. T. Cushing, Dearborn Chemical Co., B. E. Tull, president, Texas Pipe Line Co., R. V. Hanrahan, president, Humble Pipe Line Co., and Charles Fitzgerald, Pure Oil Pipe Line Co. of Texas, Dallas.

standards, among which are standardization of electric motor foundation plans, foundation bolts, key-way sizes and positions and distances of ends of shafts from center line of motors for 15-35, 20-50, 25-65 and 75 H. P. motors.

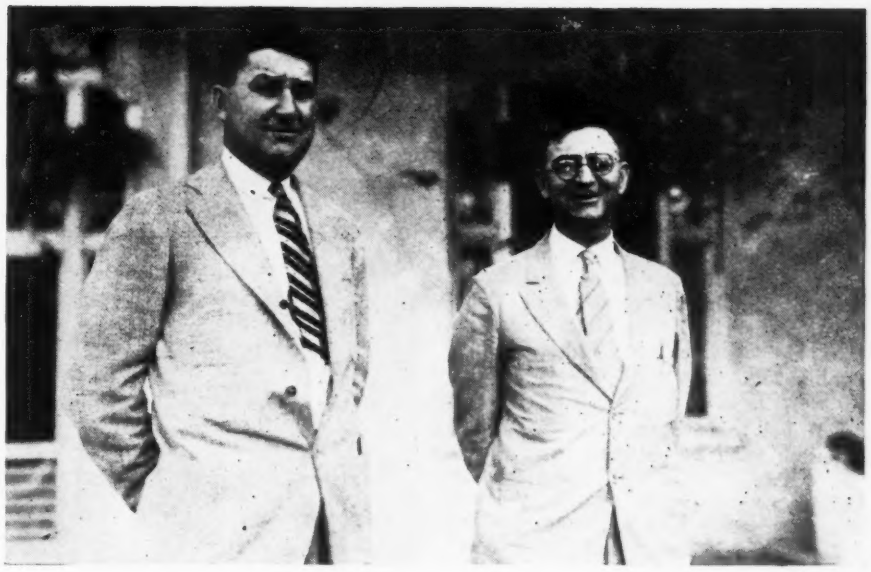
Belting

THE Belting Committee announced that final specifications had been adopted on four out of the six types mentioned in the A. P. I. standard specifications. These were for rubber, Balata, leather, and cotton fabric. Specifications for solid woven hair and solid woven cotton belting remain tentative. In making the specifications final on the four types, slight revisions were made. The most important change concerned ply belts, in which the basis for testing was changed from pounds per inch of width to pounds per inch per ply.

The Rubber Association of America placed its stamp of approval on the A.P.I. specifications. It was brought out at the meeting that many manufacturers are designing their products in accordance with A.P.I. recommendations, and that several oil companies are purchasing belts only after testing them on the basis of conformity with A.P.I. requirements.

G. H. Bowlus, General Petroleum Corp., Los Angeles, read a report on belt fasteners tests, and also reported on standard specifications for tension testing jaws. Research work on these two subjects will be continued. In the report of the committee's work by A. H. Riney, Phillips Petroleum Co., Bartlesville, national chairman, it was stated that the weakest part of all belts tested so far is at the clamp. It was also brought out that in testing belts, the character of jaws in the testing machine very largely determines nature of the results.

W. L. Connelly, vice-president and general manager, Mammoth Oil Co., Casper, Wyo., in a victorious pose just after having defeated J. Edgard Pew in a game of golf.



Left to right, Carl A. Young, director of standardization, American Petroleum Institute, and J. C. Stillwell, assistant.

CONTINUING previous efforts to determine means of developing fatigue or endurance regulations for A.P.I. belting the committee report stated a machine was constructed with this end in view and many tests made. It was found through this research that a machine of the type used was not satisfactory for breaking down the belt itself through fatigue, but that in all cases it was the belt fastener which first showed lack of endurance. F. O. Prior, Mid-West Refining Co., Casper, read a report on these fatigue tests.

Robert Burnett, Humble Oil & Refining Co., Houston, read a report of research work done along the line of determining elastic properties of belts. The belt committee has contended for some time that elasticity is a large factor in belt quality, as well as tensile strength and elongation characteristics.

Although recommendations already have been made with regard to care and use of belting, the committee had prepared a more comprehensive set of rules which are to be printed in the A.P.I. handbook. Robert Burnett read a report on this subject.

Steel Tanks

TENTATIVE general specifications for steel storage tanks adopted at the Tulsa meeting of the American Petroleum Institute, were abandoned at the Colorado Springs standardization conference, and a new set of specifications adopted. Ralph J. Reed, of the Union Oil Co. of California, national chairman, presided.

The revised tentative specifications consist only of approximate dimensions and capacities, but the committee plans to proceed immediately with detailed designs. These designs, after having been submitted to the subcommittees for study, will be considered for adoption at the next annual meeting of the Institute. In the new specifications for riveted steel tanks, a 72-inch plate will be used, the plates lengthened and tank diameters changed from the previous specifications. A 6-foot multiplier will be used, instead of 5-feet, as formerly, manufacturers expressing the opinion that this will reduce costs.

Schedule of approximate dimensions and diameters for A.P.I. standard tanks is as follows:

Capacities in barrels of 42 gallons.

Diameter	Height 23'6"	29'6"	35'0"	41'0"	47'0"
36'	4,400	5,500	6,500	7,600	.....
48'	7,300	9,400	11,000	13,000	.....
60'	.....	15,000	18,000	21,000	.....
78'	.....	25,000	30,000	35,000	.....
102'	.....	43,000	51,000	60,000	.....
120'	.....	59,000	70,000	82,000	94,000
144'	.....	85,000	103,000	120,000	138,000

A sub-committee on bolted tanks, appointed at the Tulsa meeting, with L. N. Slater, Western Pipe & Steel Co., Los Angeles, as chairman, presented a tentative standard schedule which was adopted by the main committee. This will be printed and circulated to the industry and manufacturers for comment.

This schedule lists 10 sizes of bolted tanks running from 100-barrels to 10,000-barrels capacity. Sizes in barrels include 100, 200, 250, low 500, high 500, high 1,000, 2,000, 5,000 and 10,000. These tanks will be completely interchangeable, so that a stave from one manufacurer may be interchanged

with a stave from another. It was announced that one manufacturer will continue to make his own type of tank but will also make the A.P.I. standard tanks.

At present there are a large number of bolted tanks on the market, running up from 65 to 10,000 barrels. One manufacturer alone makes 30 different sizes. Under the proposed A.P.I. schedule, the 200-barrel tanks will simply be the 100-barrel tanks with two rings, making it twice the height. The low 500-barrel is a double 250. The high 500 is half of the low 1,000.

All bolts in these tanks will have 2″ pitch with 2″ between rows center to center. All will have double bolted seams with square pattern. Water seal roofs are figured for 9-inches of water. All cone roofs will have pitch of 1-inch in 12-inches. Standard sheets to be used in all tanks will be 60″ x 100″.

Tubular Goods

SO EXHAUSTIVE and so thorough has been the work of the committee on oil country tubular goods that their work at Colorado Springs, was confined to details. One suggestion made at the meeting was rather novel in nature, for it was the case of the consumer telling the manufacturer how to save money.

It was suggested that short lengths of plain end line pipe, now scrapped, might be welded at the mill. Some of the users were certain such increased lengths would be just as serviceable as the originally completed joint. A committee was appointed to visit the mills and take up the question with the manufacturers. The mills themselves have had no experience in this respect, hence it is original work.

The committee also will investigate chemical properties of open hearth steel, as a change in the phosphorous content has been suggested.

About a year ago the Natural Gas Association suggested that, since the subject of line pipe was common to the oil and gas industries, the N. G. A. work up a set of specifications suitable for the gas industry, and to be submitted to the A.P.I. This table of specifications has practically been adopted by the Institute. The only details as yet not settled have to do with chemical composition, lengh of joints and certain details of testing.

Rotary Drilling Equipment

CAPT. J. F. LUCEY, national chairman of the rotary drilling equipment committee, reported their work completed except for certain slight changes in specifications referred to the engineering sub-committee for recommendation.

At Colorado Springs, the section

W. R. Boyd, jr. assistant secretary and counsel, American Petroleum Institute

relating to gage dimensions for rotary drilling taper joints, long a subject of discussion, was adopted.

The committee adopted standard dimensions for goose-neck connections on swivels. The engineering sub-committee was given the prints of several designs to study and report.

Larger sizes of line shaft than 6-inch were up for action. Tentative specifications on 6½ and 7-inch sizes were adopted, details to be worked out by the engineering sub-committee.

As with all the other standardization committees, the subject of a code of field practice is receiving attention. For the present, however, it was agreed that not enough experience has been had with A.P.I. specification rotary equipment to recommend a code.

Cable Drilling Tool Joints

MAJOR work of the cable drilling tool joint committee has long been completed and 48 companies and individuals have been licensed to use the gages. The work at Colorado Springs was minor in scope.

One of the jobs ahead is the formulation of a code on care and use of cable tools in the field. At the Tulsa meeting a committee was appointed with George H. Jacques, of the Mid-West Refining Co. as chairman, to get this code under way. The committee made a partial report, saying it was not representative of all sections of the country and all conditions. It is planned to submit a complete report at the Chicago annual meeting of the Institute.

The committee was requested by a manufacturer to consider adoption of a taper tool joint of a size smaller than any now listed, as it was necessary to have a joint for tools to operate inside of 4-inch inside diameter casings. It was then decided by the committee that two sizes of small joints were necessary and a committee consisting of Frank J. Hinderliter, Tulsa; George Spang, Butler, Pa.; and C. T. Mapes, Pittsburgh, was named to consider the proposal.

In the absence of Thomas Fleming, Jr., of the Oil Well Supply Co., national chairman of the cable tool committee, E. H. Williams, National Supply Co., Pittsburgh, presided.

Rig Irons

THE meeting of the committee on rig irons was presided over by William Schwemlein, Parkersburg Rig & Reel Co., chairman of the manufacturers' sub-committee. The committee adopted an alternate 6-inch band wheel flange specifications, with the same bore and keyway dimensions as the existing flange, but with an outside diameter of 52 inches and holes for 12 one-inch bolts on a ⅛-inch bolt circle.

Revisions of specifications for jack post boxes were tentatively adopted so that size and position of dowel on the base and spacing of beads on the base for engagement with the jack post are covered. A specified spacing for centers of holes for hold-down bolts also is given in tentative form.

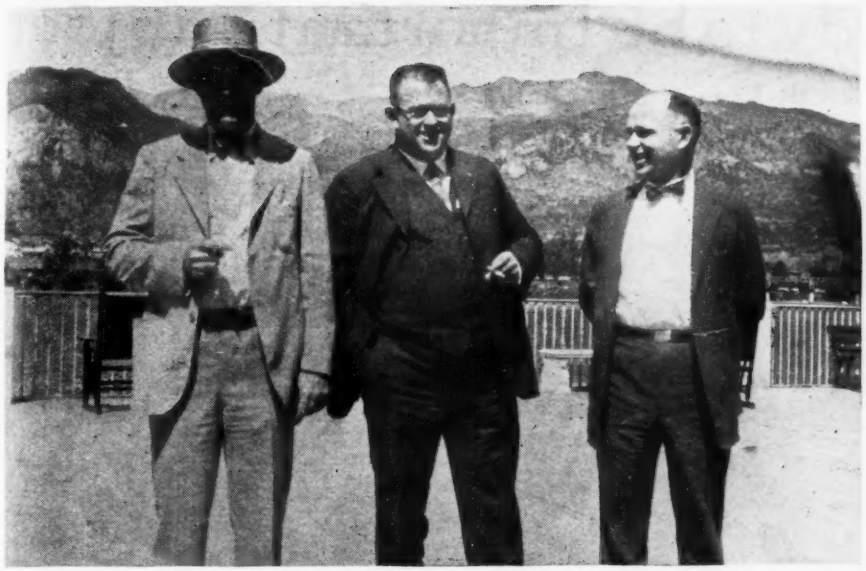
A proposed code on proper care and use of rig irons has been circularized by the committee and is now in approved form, ready for approval by the committee on Codes appointed at this meeting.

The committee stated the chief problem now confronting the rig iron manufacturer is bringing the standardized rig iron outfits into wider use. There must be enough demand for these outfits to allow the manufacturer to get on a production basis, thereby permitting him a fair profit and an opportunity eventually to absorb cost incurred in preparing to manufacture the standardized irons.

Boilers

JOHN R. SUMAN, of the Humble Oil & Refining Co., Houston, presided over the meetings of the A. P. I. Committe on Standarization of Oil Field Boilers, in his capacity of acting national chairman. National Chairman S. J. Dickey, of the General Petroleum Corp., Los Angeles, who succeeded the late A. B. Steen, was not present.

The committee decide that the dome on oil field locomotive type boilers could be located optionally either over the fire box or over the barrel



Left to right, E. J. McKee, production engineer, Phillips Petroleum Co., Bartlesville, Okla., H. J. Burnish, A. O. Smith Corp., Milwaukee, and J. A. (Buck) Lupfer, technical assistant to vice-president, Worthington Pump & Machinery Corp., New York.

of the boiler. If dome is located over the barrel it should conform to A.S.M.E. regulations. An amendment to the present A.S.M.E. code by which domes may be installed up to 80 per cent of diameter of barrel was proposed, and the A.S.M.E. is urged to adopt it.

It was decided to make no changes in the present A.P.I. standard stack, but that it be made in two sections of equal length. This was put up to the manufacturers' committee for approval. The following features of boiler standardization were discussed but with no action taken:—drilling of stay bolts; internal clearances in boilers; minimum width of water leg; spacing of tubes.

The matter of a recommended code on care and operation of oil field boilers was held over until the next meeting, when a larger attendance is hoped for.

Wire Rope and Manila Cordage

C. C. SCHARPENBERG, of the Standard Oil Co. of California, and national chairman of the committee on standardization of wire rope and manila cordage, presided over the deliberations of that body. He has put in several years of hard work for the committee. Harry A. Leschen, of A. Leschens & Sons Rope Co., chairman of the manufactures sub-committee, also took an active part in the proceedings.

Several additions were made to the code on recommended field practice. Grade "H" has been eliminated from the specifications because it caused confusion with special grades of rope made by various manufacturers.

The California committee reported that 900 wire lines in its territory had been brought to A.P.I. specifications and 268 of them tested. The Mid-Continent committee reported 340 lines tested on specifications, and reported also that four large companies had placed wire line inspectors in the field to instruct in proper care and handling of lines, as well as to keep up with service rendered by the lines. These companies were said to have obtained a 20 to 25 per cent. increase in life of wire lines.

Two difficult problems confront the wire rope committee; one is the evaluation of wire rope life and the other is a way of securing uniformly good wires. The Union Oil Co. of California and the General Petroleum Corp. have developed a meter for the correct evaluating of wire rope life for rotary drilling lines. The committee urged on users of wire lines that power, speed, and materials must be correlated and that there should be an efficient and sensible limit on power. This was caused by operators making it a practice to increase speed and power as they increase size of lines, grooves and sheaves. The committee pointed out that even the best of material can be broken if overloaded.

Derricks

THE Committee on Standardization of Rigs and Derricks, under leadership of W. W. Fondren, vice-president, Humble Oil & Refining Co., national chairman, announced that the standard specifications are complete and ready for publication in final form. These were approved by the A. P. I. directors at their last meeting, and govern construction of steel and combination wood and steel derricks, and standard rig parts.

The standard rig and derrick specifications will be sectionized as follows:—Sec. 1 material covered; Sec. 2, workmanship and finish; Sec. 3, steel derrick dimensions; Sec. 4, steel derrick strength and capacity requirements; Sec. 6, combination wood and steel derrick strength and capacity requirements; Sec. 7, standard rig parts; Sec. 8, standard rig parts, strength and capacity requirements; Sec. 9, A. P. I. marking; Sec. 10, inspection and rejection.

Appended to these specifications will be the committee's recommendations for suitable concrete derrick corners, as well as the proper making of concrete for this purpose. The specifications will become effective 90 days after they have been printed and distributed in final form, which Mr. Fondren announced would be in the near future.

Also appended to the specifications will be a code of recommendations for the selection, care and use of A. P. I. standard derricks and rig parts. The committee has tentatively set up governing dimensions for band wheel houses, belt tunnels, engine houses, rotary draw works engine houses, bull wheel houses, and rotary slush pump houses.

IN making his report of the committee's work, Mr. Fondren stated that the use of A. P. I. standard derricks and rigs will greatly reduce necessary stocks to be carried by both manufacturer and user, thereby saving a great deal of money. The industry is urged to start using the standardized material as soon as it is available.

The specifications, which are now issued in proof form, provide for 11 sizes of steel derricks, running from 66 feet to 122 feet in height, with uniform base squares and water table openings. Optional base square sizes are provided for each height above 66 feet. The 122-foot derrick, for example, may have either a 24 or a 26-foot base square. Water table openings are 5 feet 6 inches for all derricks 80 feet high and higher. The two lower derricks have 4 feet 4 inches water table openings.

Combination wood and steel derricks are provided for in four sizes, they being 73, 80, 87 and 122 feet in height. Base square for the two highest types is 24 feet, for the 80-foot derrick, 22 feet, and for the 73-foot, 20 feet. Water table openings are 5 feet 6 inches for the three highest types and 4 feet 4 inches for the 73-foot type.

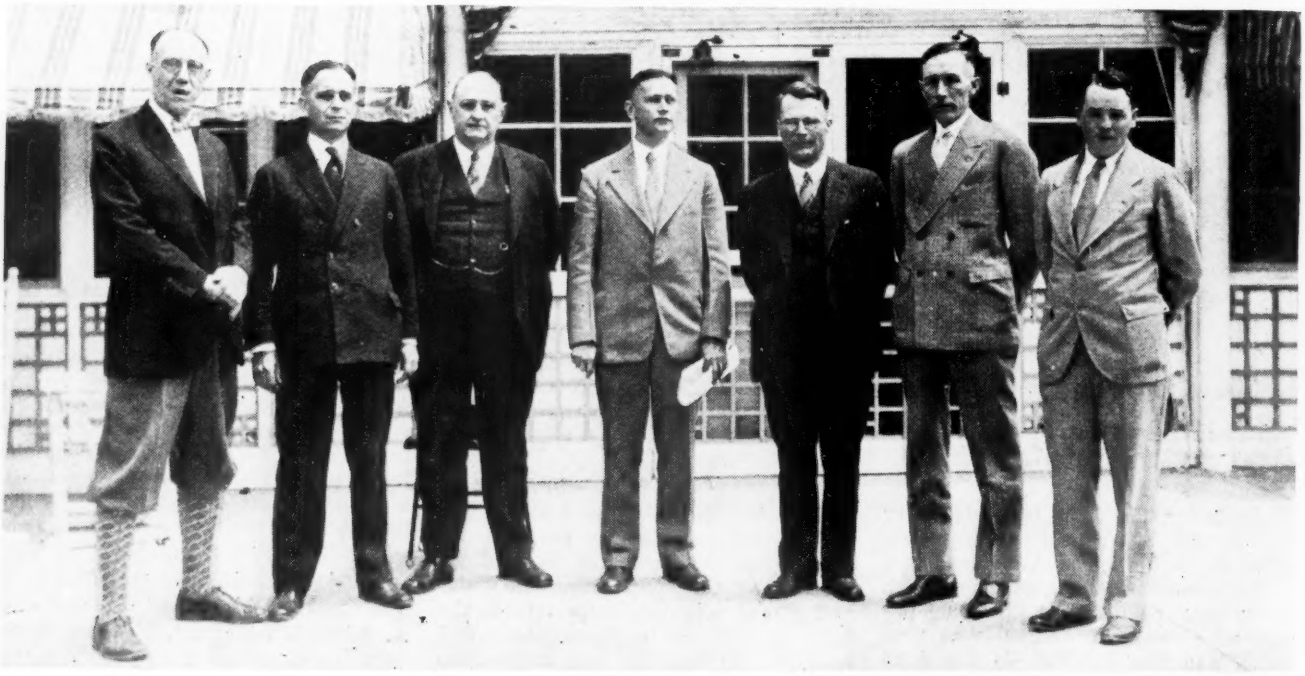
Sweney Buys in Springfield

SPRINGFIELD, Ill., June 16.—Sweney Gasoline & Oil Co., for 18 years oil distributors in Peoria, announced today the purchase of the Tulsa Oil Co., of Springfield. The latter company's two service stations will be run under Sweney's name.

Corrosion Study to be Important Subject

By Lawrence E. Smith

N. P. N. STAFF WRITER



American Petroleum Institute Committee on Corrosion at standardization conference, Colorado Springs. Left to right, Dr. F. N. Speller, National Tube Co., chairman; C. R. Weidner, Prairie Pipe Line Co., Independence, Kans.; C. C. Lakin, Standard Oil Co. of Indiana, Chicago; Ralph J. Reed, chief engineer, Union Oil Co. of California, Los Angeles; E. P. Bly, Standard Oil Co. of California, San Francisco; F. Ray McGrew, president, Standard Pipe Line Co. of Louisiana, Shreveport; William G. Heltzel, chief engineer, Sinclair Pipe Line Co., Tulsa. N. P. N. Staff Photo.

COLORADO SPRINGS, June 18

MORE and more, it appears that one of the major economic projects the American Petroleum Institute has attacked is the corrosion problem.

The second general meeting on this subject under A. P. I. auspices was held the night of June 16, in Colorado Springs. The first meeting was last December, at the annual meeting of the A. P. I. in Tulsa. Then a resolution was adopted asking directors of the institute to sponsor a program of real study, research, recommendation and education on the corrision problem in the oil industry.

Directors have not yet acted on that resolution, as there has been no meeting of the board since the Tulsa meeting. The president of the institute, however, named a temporary committee, authorizing it to go ahead and set up tentative plans for getting the work under way in the event the institute approves.

The committee consists of Dr. F. N. Speller, National Tube Co., chairman; E. P. Bly, Standard Oil Co. of California; Ralph J. Reed, Union Oil Co. of California; F. Ray McGrew, Standard Pipe Line Co.; W. G. Heltzel, Sinclair Pipe Line Co.; C. R. Weidner, Prairie Pipe Line Co.; C. C. Lakin, Standard Oil Co. of Indiana.

ALL members of this temporary committee were in Colorado Springs for the meeting. Dr. Speller presided. He told of the questionnaire that had been sent to oil companies, asking them to outline the nature of their problems, how they were attacking the enemy, corrosion, as companies; how they had delegated the work they were doing.

About 500 companies were addressed by the committee, at the time of the Colorado Springs meeting some 50 replies had been received. It was decided to wait a little longer and analyze the data that had been received. Many of the replies were quite detailed and of large benefit to the committee in planning the work.

Data on all branches of the industry were sought. Dr. Speller said that so far as the committee has gone, it is probable that the refinery losses from corrosion total about $44,500,000 annually. Losses seem to be remarkably uniform on the basis of each thousand barrels of crude charged into the refineries.

Pipe line losses probably exceed $25,000,000 per year and an additional $4,500,000 loss is charged against tankage in the pipe line division. The marine department of oil transportation loses at least $14,000,000 annually. No estimates were made on the producing division, but the total for the industry runs well over $100,000,000 annually. Quite a saving to attempt to make, said Dr. Speller.

WHILE the proposals are now tentative, the chairman outlined several approaches to a thorough study of the corrosion problem. These were:

1—Correlation of the work oil companies have done and are doing to protect their own equipment. Each company should designate an executive to follow through the work of the A. P. I. committee and other associations that are studying corrosion.

2—Contacts should be established with other organizations such as technical societies and manufacturers' associations who are working on corrosion problems in other industries.

3—New research work should be undertaken as the fundamental nature of corrosion is not yet well known.

4—A bulletin service should be established to exchange data and ideas between the oil companies.

5—A corrosion conference should be held at each annual meeting of the institute and regional conferences should be called to discuss local problems.

Higher Salvage Value for A. P. I. Standard Equipment, Operators Find

By L. G. E. Bignell
Parkersburg Rig & Reel Co.

Presented at A. P. I. Standardization Conference, Colorado Springs, June 15-17

THERE should be no reason for delay in accepting A. P. I. Standard Equipment and putting it into use, for primarily there is no radical change in design from what has been recognized as good practice for many years, the main changes involving details of fit, that is, making the various parts so that they can be readily used with other parts, even though the set may be made up of several different makes of material.

A close study of A. P. I. specifications will show that there is equipment suited for every purpose, but one piece or class of equipment should not be considered entirely by itself, but should be considered in connection with other A. P. I. standard apparatus.

To illustrate, it has been found there is a very wide difference of opinion regarding the proper height of derricks suitable for the many different fields, with a result that some 400 different size derricks have been manufactured, whereas the A. P. I. Derrick Specification limits the number of sizes to 11. It is very easy to estimate the saving in cost that will be effected by this reduction in "rig patterns" both to the manufacturers and production companies.

But to consider the 11 standard size derricks as proposed by the A. P. I. specifications alone might lead to some confusion, for it might be found hard to handle certain strings of casing or tools in some of these derricks, but, if the casing and tools are considered from A. P. I. specifications recommendations also, it will be found that everything will fit together very nicely.

There seem to be many benefits that will accrue to the industry by the use of A. P. I. specification material and a few of them are given as follows.

In the past the operators have set up among themselves certain apparatus as standard in its class, and it has been found that, when material has been offered for re-sale, that kind recognized as "standard" has commanded a higher price than other equipment not so considered.

There are certain makes of steam, oil and gas engines recognized as best suited to oil country work because their development has been brought about by very careful study of the field conditions to which they are to be subjected, and those engines will find a quicker market when offered for re-sale than others without this reputation behind them.

The same is true of casing, tubing, rig irons, steel equipment and in fact all apparatus used in and around oil wells, and, if it is true of what was only an accepted standard developed by a manufacturer, is it not logical to assume that A. P. I. standard equipment will have a greater re-sale value, because it retains all of the good features of the original design plus the added advantage of interchangeability of parts.

To deal with a specific case as illustrating this condition, several years ago after the now famous "Ranger" boom, several of the larger companies had accumulated excess stocks of rig irons of several makes, and offered part of this stock for re-sale.

First the companies offered certain makes of irons that were not considered standard, and to move them made very attractive prices. When that had brought about a partial reduction in stock, the "standard" make of rig irons were offered, but at a price of from $150 to $250 per set higher than the price asked for the other irons.

It then developed that the "standard" rig irons sold much more readily at the higher prices because experience had proven it was safe to purchase those rig irons and move them away from the rigs to other fields for further use, because parts were interchangeable and spares could be easily secured from the manufacturers' other local warehouses.

Much more recently it has been found that on wells abandoned in the Panhandle district rigs equipped with irons built in accordance with standard specifications have brough from $300 to $600 higher price per outfit than other rigs without standard specification irons in the derricks.

Another advantage to accrue from the use of A. P. I. Standardized Equipment will be the lower charge off value to be made against each well, for with this standard equipment it will be much easier to combine it with other material of like specifications and ultimately entirely use it up.

At this time of low market value of crude oil this is quite essential, for anything that will tend to reduce cost of drilling and operating wells is very acceptable to the industry.

The ability to transfer material from one field to another as drilling activity requires with the assurance

Left to right—F. E. DeCoster, Amarillo, Glenn Skinner, Bartlesville, and W. H. Price, Bartlesville, all with Black, Sivalls & Bryson

that it can be used with the minimum of replacement cost is another advantage to accrue by the use of standardized parts.

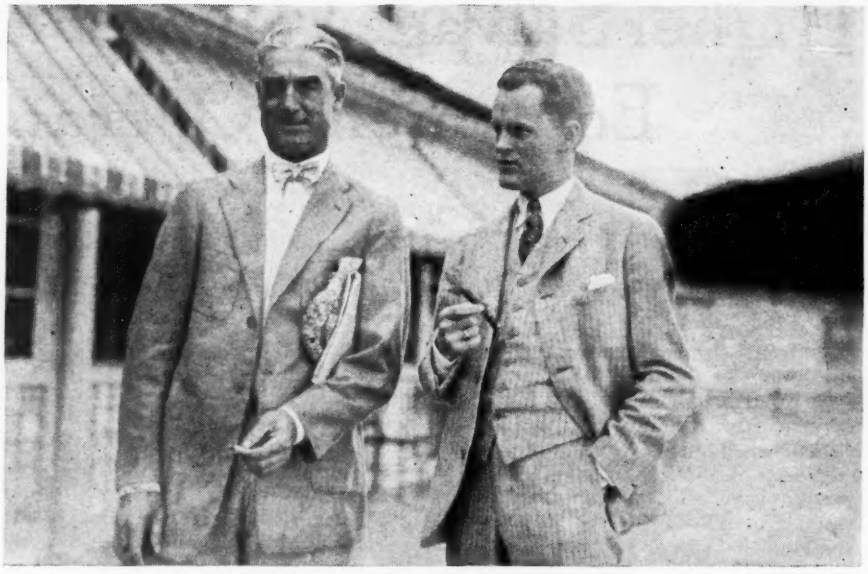
This means an advantage, because a maximum of credit can be given to the well from which the equipment is taken and thereby hold the cost of operations there at a minimum, and still not burden the new project with high charges for it is recognized that this material may be removed from the second location to future work, and thus the first cost will be distributed over a large number of wells.

The standardization of field operations will follow the use of standard equipment, for it must follow that, if the drillers become accustomed to a certain class of apparatus and use it in a certain way in one field, they will continue to use it in that manner in other fields later.

It further follows that the standard of drilling operations will be raised, for, the longer the crews continue to use one type of apparatus, the more familiar they will become with it, and this familiarity will tend to make them more skillful in their work, and permit better and cheaper wells to be drilled.

Where crews move from field to field following periods of activity and are required to become familiar with different classes of equipment as well as learn the different formations to be drilled trouble follows, which can be greatly minimized if the necessity of becoming acquainted with new equipment is eliminated by the use of standard parts in all fields.

The capital invested in equipment becomes generally used, for inventories will quickly disclose where excess stocks are available for transfer to points where needed and this can be done with the assurance that parts will fit, and the transfer costs not thrown away by finding out too late that the transferred material is not suited to the conditions in the field to which it has been moved.



Left to right, Z. F. Harshton, Imperial Belting Co., Chicago, and J. S. Freeman, assistant to vice-president in charge of production, Skelly Oil Co., Tulsa

It is equally true that the inventory will be reduced because a fewer number of sizes of parts will be carried in stock when standardized equipment is used. Frequently it has been found that an excess stock of casing and pipe in one field could not be transferred to another field where it was needed as it would not "make up" with the pipe already in use in the field where needed most.

There seems to be little doubt but that deeper drilling will be required in the future and here again a saving can be effected by the use of A. P. I. standard equipment, for this material may be selected with the intention of drilling below 5,000 feet, as it may be found necessary, but the equipment will still be quite suitable for operations now being carried on in wells around 4,000 feet in depth.

From the foregoing it therefore seems there are many benefits to accrue to the industry by use of A. P. I. Standardized Equipment, and the problem now before the industry is to find ways and means of actually putting this material into practical use in all fields. This seems to rest largely with the executives of the producing companies to outline their wishes to their assistants, for the manufacturers are ready to make the equipment upon a production basis just as soon as the demand for it is apparent.

To summarize these advantages that will follow such a movement these results seem assured:—

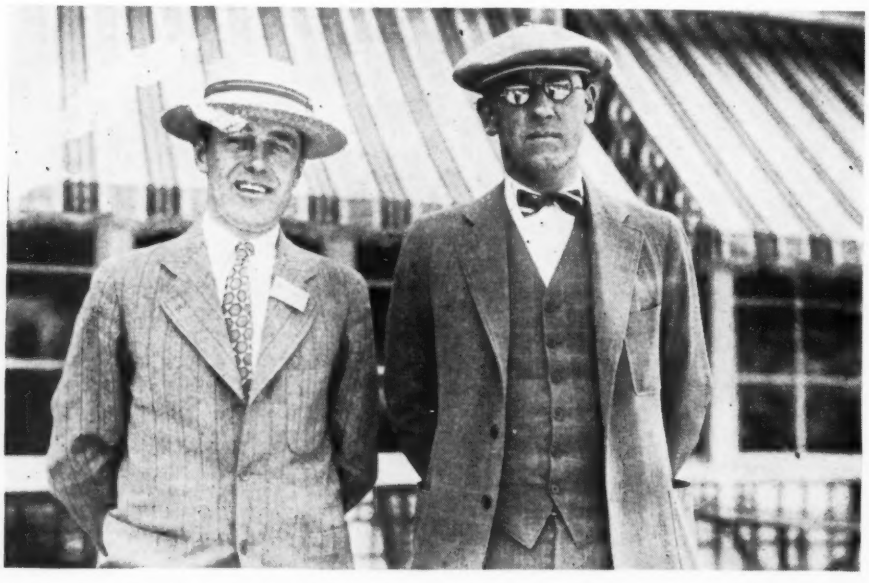
First:—Lower drilling costs.

Second:—Higher salvage values on equipment.

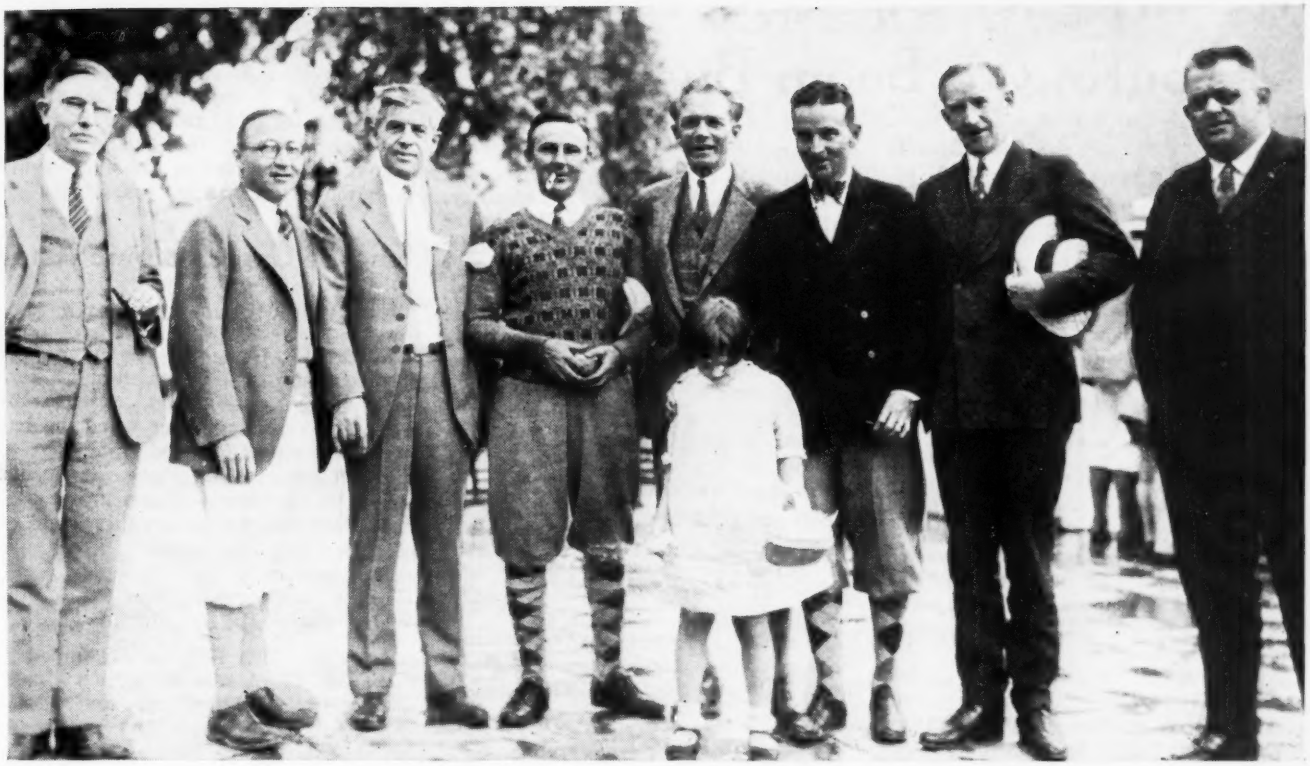
Third:—Lowering of production costs.

It may be argued that, with the present low market value of petroleum, it is not the proper time to inaugurate this movement, but against that can be set forth the fact that the lower the market value of oil the greater will be the percentage of saving, and it is quite evident that reduction in drilling and production costs is very necessary at this time to offset the low market value of the oils being produced.

By co-operation between manufacturer and consumer and the adoption of definite rules of procedure on the part of the producing companies it seems that some very marked progress may be expected in the way of putting A. P. I. Standardized Specification Equipment into actual field use within a very short time, to the general benefit of all concerned.



Left to right, W. S. Nicoll, Midwest Exploration Co., Amarillo, and A. W. Peake, general superintendent of production, of Midwest Refining Co., Casper, Wyo.



Left to right, A. W. Smith, Youngstown Sheet & Tube Co., Carl Hochenauer, A. O. Smith Corp., Harry Bishop, Harrisburg Pipe, W. H. O'Conner, general purchasing agent, Marland companies, Ponca City, winner of the president's trophy in the Colorado Spring golf tournament; W. M. Neckerman, Youngstown Sheet & Tube Co., Allen Butts, A. O. Smith Corp., H. E. Koopman, vice president, Phillips Petroleum Co., Bartlesville, H. J. Burnish, A. O. Smith Corp. In the center is Mr. Koopman's young daughter.

Marland Man Wins Prize In Golf Tournament

DENVER, June 20.—W. H. O'Connor, purchasing agent for the Marland companies, Ponca City, was the winner of the grand prize in the American Petroleum Institute golf tournament at Colorado Springs, Saturday. The prize, a beautiful silver service, was put up for the contestants to work for by President E. W. Clark of the institute.

The winner turned in a net score for the 18 holes on the Broadmoor course of 74. His handicap was 22. Runner up for the grand prize was A. W. Peake, general superintendent of production for the Midwest Refining Co., Casper, whose net was 75 with a handicap of 27.

Additional to the grand prize, four prizes were offered in each of the four flights of tournament play. First prize in each flight was a set of irons; second was a set of woods; third was a golf bag and fourth was one dozen balls. In the first flight W. M. Neckerman of the Youngstown Sheet & Tube Co., won first prize. Carl A. Young, secretary of the standardization division of the institute was second, C. M. Barton was third and Dudley Golding, Independent producer of Wichita Falls, was fourth. Mr. Golding, former state amateur champion of Texas, turned in a card of 75 but had been penalized two strokes to offset his skill, thus raising his net score to 77.

In the second flight, John R. Suman, of the Humble Oil & Refining Co. and Weldell Smith, of Los Angeles, tied for first and second. W. R. Guiberson, of the Guiberson Corp. was third and John Baxter was fourth. In the third flight H. W. Fletcher, D. S. Faulkner and C. E. Markey finished on even terms and A. F. Campbell was fourth.

The fourth flight's first prize winner was A. W. Peake second prize went to W. W. Fondren, of the Humble Oil & Refining Co., third to J. Edgar Pew and fourth to F. Ray McGrew, of the Standard Pipe Line Co. In the events that were tied the winners were to arrange settlement among themselves.

Additional to the four flights, prizes were offered in the "kickers" handicap. First prize, a pair of clubs, was won by M. C. G. Brennan of the Stearns-Roger Manufacturing Co., second prize, one dozen golf balls, by D. B. Harris, third prize, 10 balls by C. R. Weiss of the Link-Belt Co. Fourth prize in this event, six balls, went to the following all being tied and the same prize being given to each, T. D. Davies, National Tube Co., W. A. Trout, Emsco Co., E. E. Robbins, Z. E. Harshton, R. A. Wilson and F. N. Speller. The driving contest was won by F. C. Prior, Midwest Refining Co.

DUE to lack of space in this issue, two important papers presented before the Standardization Conference, originally scheduled to appear in this issue of NATIONAL PETROLEUM NEWS, will be carried in its June 29th issue, together with more N. P. N. staff photographs of oil men and equipment and supply men attending the conference.

The two papers to be carried in the next issue are Heat Treated Sucked Rods Reduce Failure Through Failure, by Welton J. Crook; and A. P. I. Tubing Stronger than Other Types, by W. L. McLaine.

N.I.O.M.A. to Meet at Grand Island

CHICAGO, June 17.—Charles M. Sutherland, secretary of the Nebraska Independent Oil Men's Association, has announced the next regional meeting of his organization will be held at Grand Island, Neb., July 20 and 21. Mr. Sutherland said it might as well be called a state meeting because the attendance is always good at the state's third city.

West Virginia Oil Men Urge More Touring to Boom Business

Staff Special

CHARLESTON, W. Va., June 17.

OIL JOBBERS of West Virginia will endeavor to persuade West Virginians to use more gasoline and oil by pointing out to them the pleasure of their visiting interesting places in their own state. Such a movement was decided on at the fourth annual convention of the West Virginia Oil Marketers' Association here June 15 and 16.

The idea to "See West Virginia First" was advanced by D. E. Frierson, secretary-treasurer of the association. Mr. Frierson exhibited excellent pictures of interesting places in the state. The pictures can be reproduced in large quantities at nominal cost. He urged members to buy these, exhibit them at their service stations, and distribute them about their towns; their names, of course, are to appear on the pictures.

Ross B. Johnson of the West Virginia department of agriculture, which has been developing a modest campaign to advertise West Virginia, commended Mr. Frierson's idea and told how the state would co-operate.

Mr. Frierson and other members related how little people in West Virginia realize the beauties of that state. While the state probably has not as large a percentage of good roads as other states, nevertheless, few people even in the state seem to realize the extent of good roads it has. This fact will be brought home to the automobile owners this summer by the oil men.

W. Walter McKee, Elk Refining Company, Charleston, who was vice-president of the association the past year, was elected president, succeeding Floyd S. Chapman, Huntington, W. Va., who has retired from the oil business. H. G. Triplet, Sterling Oil Co., St. Marys, W. Va., was elected vice-president. Mr. Frierson was re-elected secretary-treasurer. He represents the Fry Pump & Tank Co. of Charleston, agents for marketing equipment.

The new board of directors consists of H. C. Grimes, Triangle Filling Station Co., Elkins; G. G. Smith, Dixie Co., Fairmount; F. G. Bish, Appalene Oil Co., Clarksburg; R. E. Spears, Spears & Riddle, Wheeling; J. R. Prince, Benoline Co., West Virginia, Parkersburg; J. W. Wright of the Wright Oil Service Co., Huntington; R. E. Hare, Tri-State Refining Co., Kenova; C. A. Street, Viking Gas Corp., Charleston; R. T. Elkins, Oil Service, Beckley; and Don Chaffin, Chaffin Oil Service Co., Logan.

Following the annual meeting, directors decided to organize local petroleum clubs in all districts.

H. M. Ewing, assistant secretary, National Petroleum Fire Insurance Co., Philadelphia, talked on "Fire Prevention."

W. A. Milne, executive secretary, Ohio Petroleum Marketers' Association, Columbus, whose topic was "From Cave Man to Unity." He discussed the problems of the oil marketer and how to attack some of them.

T. A. Boyd, research laboratories, General Motors Corp., Detroit, whose topic was "Gasoline and Slaves."

Warren C. Platt, NATIONAL PETROLEUM NEWS, Cleveland, spoke on "The Oil Man's Opportunity."

The afternoon of the first day was devoted to a trip through the Kanawha valley and in the evening there was a banquet and entertainment. The meeting was well attended.

Wisconsin Oil Jobbers Combat Higher Tax

CHICAGO, June 17.—Wisconsin Independent Oil Jobbers Association, on June 8, at its regular monthly meeting in the Park hotel, Madison, considered eight revenue bills pending in the Wisconsin legislature that affect the oil industry.

Wisconsin is about to get a gasoline tax increased from 2 cents a gallon to 4 or maybe 5 cents. The bill is popular, although it is tabled at present. The legislators that "sidetracked" it, opposed it for other reasons than that the tax might be too high. They favor the general sentiment of the bill which would eliminate the present weight tax on automobiles and provide registration for all at a uniform nominal fee.

This, the politicians say, will eliminate much red tape in the automobile license bureau and will enable the state to save a great deal of money. They know it costs the oil jobbers something to collect the gasoline tax but they think they can collect a 5-cent tax as cheaply as they can collect the present 2 cents. The oil men have a hard time making the legislators see a higher tax would cost the oil companies more.

The oil men contend that too high a tax would reduce consumption and thereby defeat its own aim. They claim also that a 4-cent tax is twice what they have now and will therefore double the amount of tax money the oil man will have to carry on his books on all credit business after paying the tax to the state himself.

The thing that makes the public favor the tax is a quirk in the Wisconsin constitution, which limits the state's bonded indebtedness. If it could legally issue more bonds the bonds could be easily sold because the arbitrary limit is much lower than the indebtedness justified by the state's wealth. But the fact remains that to issue bonds Wisconsin has to change its constitution and that would take more than three years.

Knight Comes Home After Work in Argentina

WICHITA, June 20.—C. A. Knight has returned to his former home here for a visit after an absence of nearly two years during which he has been superintendent of the government refinery at La Plata, Argentine. Prior to his South American experience Mr. Knight was superintendent of the Sterling refinery for five years before it was sold to Waite Phillips and later was with the White Eagle Oil & Refining Co.

In 1925 Mr. Knight assembled a crew of 15 American refinery men and went to La Plata to operate the plant there which had been built by the Bethlehem Steel Co. for the government. His task was a double one, that of operating the plant successfully and of training a group of native workers to take over the plant at the expiration of a period of 18 months.

Crude available for the plant has a very low gasoline content by straight distillation. A double Cross unit was installed at the plant to increase the yield. Operation of the plant was made difficult by the fact that the crude supplied contained from 6 to 15 percent water. The emulsion would not settle out and failed to yield to ordinary methods of treatment.

It was found to be necessary to heat the crude to 150 F. before the water would drop out of the crude, which would distill off most of the gasoline in the oil. The problem of operation was solved by the installation of a pipe still to supplement the six 12 by 40 foot shell stills.

Mr. Knight believes that the plant he has been operating is probably the most beautiful refinery in existence. The government wanted the plant to be a show place and got what it wanted. Trees have been planted throughout the spacious site including the tank farm. Shell roads, grass and flower beds add to the site.

The buildings are magnificent. The power plant, for example, has tile floors and wainscoting and gleaming instrument boards. Apparently the government officials were much more interested in these points of beauty than in the cracking stills or other items of equipment necessary to make refined oils.

California Natural Gasoline Men Elect Ratcliffe President

By W. E. Green
N. P. N. STAFF WRITER

LOS ANGELES, June 18

GEORGE L. RATCLIFFE, head of the natural gasoline department of the General Petroleum Corp., and recently elected vice president of the Association of Natural Gasoline Manufacturers at Tulsa, was elected president of the California Natural Gasoline Association at the annual meeting held June 16 in Los Angeles.

I. B. Funk, consulting engineer of Los Angeles, who is a member of the executive committee of the association, was elected vice president.

The annual meeting was well attended and the members heard with much interest reports of the proceedings at the meeting at Tulsa, which was attended by 13 members of the California organization.

The announcement that the Association of Natural Gasoline Manufacturers, the body formed by the Mid-Continent manufacturers, might hold a fall meeting in Los Angeles, was welcomed and plans are being formulated and a tentative program worked out to submit to the directors of the Mid-Continent organization for their approval. Such a meeting would occupy two days, with the second day being given over to Dr. G. G. Brown of the University of Michigan, according to tentative plans. Officials of the refining companies and natural gasoline companies would be invited to attend this session, and the first day's session also, if they are interested.

The executive committee of the California organization consists of nine members, the terms of three expiring each year. At the annual meeting, R. E. Beckley, H. W. Parmalee and J. S. Watson were re-elected. The other six members are Paul D. Barton, J. A. Campbell, H. L. Eggleston, I. B. Funk, R. W. Garman and G. L. Ratcliffe.

The new officers were to meet with the executive committee June 22 when it was expected that a paid secretary would be hired to succeed J. S. Watson, employed by the Shell Co., who has served in this capacity the past year, with pay.

The annual meeting was given over largely to a report of the Tulsa meeting by those who attended. J. E. Kobernick of the Newton Process Manufacturing Co. of Fullerton, Cal., read the only prepared paper of the meeting, discussing the art of welding and the various methods and

GEORGE L. RATCLIFFE
of the General Petroleum Corp., elected President of California Natural Gasoline Assn.

tests used in the manufacture of natural gasoline plant equipment.

Secretary J. S. Watson read his annual report, showing that the California organization now has a total of 255 members, of which 190 are regular and 65 associate members.

J. M. Hicks told the meeting of the California delegation's visit to the Seminole field in Oklahoma and told in some detail of the great Sinclair plant where 20,000,000 cubic feet of gas is run daily with a recovery of about 87,000 gallons of gasoline. The Sinclair storage at time of visit was about 600,000 gallons.

HE STATED that most of the equipment was of California manufacture. Being a Californian, he could not refrain from comparing the bad roads of Oklahoma with the good roads of California, but complimented Tulsa as being a most modern city.

H. S. Cole Jr., told of the visit of the delegation to the Amarillo field, visiting and inspecting the Phillips Petroleum Co.'s five plants consisting of 115 units. He stressed the presence of copper sulphite in the gas and its injury to equipment. He made special mention of the use of radio for making reports daily to Phillips headquarters.

Arthur M. Porter of the Shell Co. made a short talk on the legal status of the stabilizer situation, now in the courts, his talk following to some extent the information given on this subject in a recent issue of NATIONAL PETROLEUM NEWS.

Mr. Ratcliffe, the new president, discussed Dr. Brown's discourse at the Tulsa meeting, advising the members to secure from the University of Michigan copies of a report recently issued giving results of Dr. Brown's experiments conducted on behalf of the Association of Natural Gasoline Manufacturers.

H. W. Parmalee of the California Gasoline Co. complimented the paper read by J. C. Chatfield, NATIONAL PETROLEUM NEWS staff writer, entitled "Vapor Recovery Plant Product Big Factor in Natural Gasoline Market," which was published in NATIONAL PETROLEUM NEWS of May 25.

He said it was most interesting and well illustrated with graphs worthy of study. Mr. Parmalee further said there was at present a better understanding between the manufacturers of the west and the east, and a feeling of close fellowship.

HE WENT into the outstanding differences between the problems faced by the natural gasoline manufacturers of California and of the Mid-Continent, with reference to transportation methods, testing methods, grading of products, etc., based upon the points brought out in the discussions at the Tulsa meeting.

Following the announcement of the election of new officers, Paul D. Barton, retiring president, thanked the members for their co-operation during the past year and for the honor conferred upon him, urging that the same co-operation be extended the incoming officials. Following his short address, the incoming president took the chair and called for a rising vote of thanks to Mr. Barton and other officials who had served so faithfully during the past year.

President Ratcliffe made a short talk, saying he was proud of the growth of the youthful organization and deplored the fact that they had wanted to do so many things which were impossible in so short a time, but stated that the officials had great hopes of accomplishing much during the coming year. He outlined the proposed plan of the two associations to hold a joint session this fall in Los Angeles.

Mayhall New Sales Director of Anderson-Prichard Co.

C. L. MAYHALL
Newly elected Director of the Anderson—Prichard Oil Corp.

Staff Special

TULSA, June 20.—C. L. Mayhall, well known throughout the refining and distributing branches of the oil industry, was elected a director of the Anderson-Prichard Oil Corp. of Oklahoma City on June 15. He will be actively associated with the management of the company as director in charge of refined oil sales.

Mr. Mayhall began his experience in the industry 10 years ago with the Ohio Cities Gas Co., now the Pure Oil Co. A little later he entered the service of the Imperial Refining Co. He was vice president and general manager of the Imperial and a director of the Western Petroleum Refiners Association over an extended period.

His keen perspective of refined oil markets and knowledge of conditions in the Mid-Continent enabled him to represent some of the major companies in the purchase of large quantities of petroleum products for export and domestic use while he was associated with the Imperial interests.

C. H. Dresser was elected a director and placed in charge of industrial naphtha sales at the same time. For several years Mr. Dresser has been sales manager of the company. He is well known among the buyers of special naphthas which must meet technical specifications.

As a part of his work with the company Mr. Dresser has developed a distribution system for specialty fractionated products through independent jobbing channels in various industrial centers. As a result of his close co-operation with the trade he has assisted in developing several new products designed to meet the needs of other manufacturing processes.

Division of the sales work in the company has been made necessary by its expansion during the past year. The company has refineries at Cyril, Okla., and Wichita Falls which specialize in the production of rubber solvents, cleaner's naphtha and mineral spirits. At Colorado, Tex., the company has a refinery specializing in the production of anti-knock gasoline. Total refining capacity of the company is now 10,000 barrels per day.

The company is active as an oil producer as well as a manufacturer. It is an owner of royalties and leases on several thousand acres in the Mid-Continent. R. Olsen is director in charge of the land and geological departments. W. M. Sturges, recently from California and formerly from Texas, was recently added to the directorate.

Officers of the company are, L. H. Prichard, president; J. Steve Anderson, vice president; and P. H. Anderson, secretary and treasurer. All of the executives are young men with practical experience in their particular branch of the company's growing activities.

C. H. DRESSER
Newly elected Director of the Anderson—Prichard Oil Corp.

A. G. Talbot Forms New Marketing Company

CHICAGO, June 18.—A. G. Talbot, head of Advanced Petroleum Corp., Chicago, this week announced organization of the Petroleum Exchange Corp., to conduct a carload marketing business in Chicago. It is to be the successor in the carload marketing business of Advanced Petroleum Corp. and is taking on a larger sales force and reaching out for additional sources of supply.

Mr. Talbot is president and treasurer of the new corporation. C. M. Brennan, formerly sales manager of Advanced, is vice-president and R. S. Brennan, brother of C. M., formerly secretary of the James B. Berry's Sons Co. of Illinois, is another vice-president. It will become active on July 1, with offices at 1101 Blum Bldg., 624 Michigan Ave.

Advanced Petroleum Corp., will continue with Mr. Talbot as president and S. J. Sackett as vice-president to handle the oil producing properties of these two men. They have properties in Texas, Kansas, Kentucky and Canada. Messrs. Talbot and Sackett will maintain headquarters with the Petroleum Exchange Corp.

Navy Asks Bids To Buy Oil and Gasoline

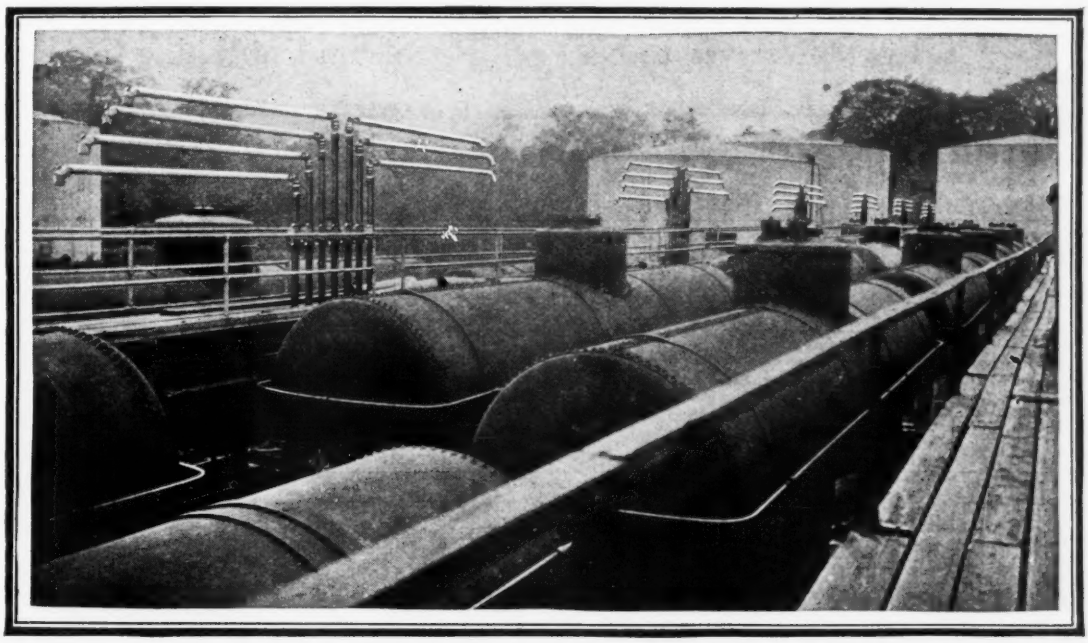
By Special Correspondent

WASHINGTON, June 20—The navy department announced, June 17, that it desired bids, to be opened at the office of the inspector of the naval reserves in California at Los Angeles, June 25, for the purchase from it, of the royalty crude oil and the royalty natural gasoline, produced from the lease, Visalia, 09208, in No. 2 reserve, California. The navy desires to contract for the sale of the crude and gasoline ready for delivery from midnight May 31, 1927 to midnight June 30, 1928.

The crude and gasoline to be sold are the product of the lease made by the navy Feb. 11, 1922, with the Honolulu Consolidated Oil Co. That company is now operating the wells on the land indicated.

In its announcement the navy department said that the sale would be made under the terms of the national leasing law of Feb. 25, 1920, and June 4, 1920. The last mentioned is the statute under which Secretary Denby thought he was authorized to make the Doheny and the Sinclair leases.

To give prospective purchasers an idea of the quantity, the announcement said that the production in March was 36,375 barrels of crude and 63,542 gallons of gasoline.



These Close-Fitting, Easy-Swinging Joints *Save Leaks and Strains in the Pipe Line*

Single Swing Joint
Sizes 2, 2½, 3 and 4-inch

WHEATON Swing Joints are a fine example of how Wheaton builds *quality* into a piece of equipment in which quality is ordinarily given small consideration. They are made of the same special-analysis brass alloy—tempered, toughened and tested—found in Wheaton Faucets, Valves, Couplings, Nozzles, Fillers, etc.

This high quality material, which neither crystallizes nor corrodes, assures a durability seldom found in swing joints. And with the fit and finish, characteristic of Wheaton workmanship, added to this extraordinary quality of material, smooth close fit and easy action are made *lasting*. Dangers of leaks are minimized.

Save trouble and save money by standardizing on Wheaton Swing Joints. They will continue their "service of satisfaction" long after the ordinary joint has been buried in the junk heap. Send for a sample today. If not entirely satisfactory, you may return it for full credit or refund. Also request copy of the Wheaton Catalog which describes and illustrates other Wheaton Products.

Double Swing Joint
Sizes 2, 2½, 3 and 4-inch

A. W. WHEATON BRASS WORKS, NEWARK, N. J.

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Compilation Of Mid-Continent Refinery Operations

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National Petroleum News

Mid-Continent Refinery Operations Week Ended June 17 (By Telegraph)

	Kansas	Oklahoma	North & Cent. Texas	North La.-Ark.	Total Week Ended June 17	Total Week Ended May 20
Plants Reporting	23	46	41	14	124	124
Crude Capacity (bbls.)	106,200	165,900	144,300	53,700	470,100	462,100
Cracking Capacity	29,000	45,800	15,750	20,200	110,750	102,750
Da. Av. Crude Runs	59,609 + 5.6	114,793 + 5.9	81,516 + 20.7	44,901 — 2.7	300,819 + 8.0	287,587
Da. Av. Other Oils	3,606 + 24.6	4,592 +186.6	4,974 + 12.1	142 — 73.2	13,314 + 40.7	12,208
GASOLINE—Gallons						
Stocks, June 10	13,953,000	50,772,000	19,437,000	3,898,000	88,060,000	97,364,000
Prod. 6-10 to 6-17	8,338,000 + 7.3	17,645,000 + 4.3	8,120,000 + 3.1	2,852,000 — 17.0	36,955,000 + 2.7	37,150,000
Ship. 6-10 to 6-17	9,237,000 + 6.0	17,215,000 — 5.0	8,814,000 + 23.8	3,739,000 — 2.1	39,005,000 + 3.3	37,227,000
Stocks, June 17	13,054,000 — 6.4	51,202,000 + 0.8	18,743,000 — 3.6	3,011,000 — 22.8	86,010,000 — 2.3	97,287,000
Ratio Sales to Prod.	110.8%	97.6%	108.5%	131.1%	105.5%	100.2%
KEROSENE—Gallons						
Stocks, June 10	3,359,000	6,105,000	2,176,000	848,000	12,488,000	12,719,000
Prod. 6-10 to 6-17	1,773,000 — 1.9	2,478,000 — 6.6	1,288,000 — 5.4	497,000 + 23.3	6,036,000 — 3.1	6,884,000
Ship. 6-10 to 6-17	1,356,000 — 11.9	2,264,000 — 4.2	1,417,000 — 17.0	364,000 — 21.2	5,401,000 — 11.1	8,333,000
Stocks, June 17	3,776,000 + 12.4	6,319,000 + 5.1	2,047,000 — 5.9	981,000 + 15.7	13,123,000 + 5.1	11,270,000
Ratio Sales to Prod.	76.5%	91.4%	110.0%	73.2%	89.5%	121.0%
STOVE DISTILLATE—Gallons						
Stocks, June 10	2,928,000	2,199,000	826,000	37,000	5,990,000	5,875,000
Prod. 6-10 to 6-17	421,000 + 79.9	431,000 + 7.2	367,000 + 21.1	68,000 + 65.9	1,287,000 + 31.3	1,004,000
Ship. 6-10 to 6-17	85,000 — 5.6	629,000 + 10.4	286,000 + 8.3	14,000 — 50.0	1,014,000 + 6.5	960,000
Stocks, June 17	3,264,000 + 11.5	2,001,000 — 9.0	907,000 + 9.8	91,000 +145.9	6,263,000 + 4.6	5,919,000
Ratio Sales to Prod.	20.2%	145.9%	77.9%	20.6%	78.8%	95.6%
GAS OIL—Gallons						
Stocks, June 10	5,597,000	42,419,000	12,238,000	8,341,000	68,595,000	65,774,000
Prod. 6-10 to 6-17	1,826,000 + 23.5	1,890,000 — 30.8	1,280,000 — 2.4	1,924,000 — 4.6	6,920,000 — 8.2	6,996,000
Ship. 6-10 to 6-17	1,228,000 + 1.8	2,191,000 + 16.7	1,121,000 — 12.0	1,348,000 + 27.2	5,888,000 + 8.7	8,397,000
Stocks, June 17	6,195,000 + 10.7	42,118,000 — 0.7	12,397,000 + 1.3	8,917,000 + 6.9	69,627,000 + 1.5	64,373,000
Ratio Sales to Prod.	67.3%	115.9%	87.6%	70.1%	85.1%	120.0%
FUEL OIL—Gallons						
Stocks, June 10	10,492,000	32,965,000	23,085,000	12,967,000	79,509,000	84,281,000
Prod. 6-10 to 6-17	6,138,000 — 3.2	8,699,000 + 30.6	9,687,000 + 6.1	6,943,000 — 4.0	31,457,000 + 7.1	29,518,000
Ship. 6-10 to 6-17	5,074,000 — 29.4	6,852,000 — 4.4	8,776,000 — 1.7	6,143,000 + 17.9	26,845,000 — 5.8	34,537,000
Stocks, June 17	11,546,000 + 10.0	34,812,000 — 5.6	23,996,000 + 3.9	13,767,000 + 6.2	84,121,000 + 5.8	79,262,000
Ratio Sales to Prod.	82.8%	78.8%	90.6%	88.5%	85.3%	117.0%

Gasoline Produced by Various Methods, Week Ended June 17

	Kansas	% of Total	Oklahoma	% of Total	Texas	% of Total	Louisiana-Arkansas	% of Total	Total	% of Total
Straight Run	5,807,000	69.6	13,493,000	76.5	7,114,000	87.6	1,161,000	40.7	27,575,000	74.6
Cracked	2,010,000	24.1	2,890,000	16.4	837,000	10.3	1,409,000	49.4	7,146,000	19.3
Natural	521,000	6.3	1,262,000	7.1	169,000	2.1	282,000	9.9	2,234,000	6.1
Total	8,338,000		17,645,000		8,120,000		2,852,000		36,955,000	

+ or — columns are % change over previous week.

Crude Runs at Peak; Gasoline Stocks Lowered

Staff Special—By Telegraph
TULSA, June 21

CRUDE runs at 124 Mid-Continent refineries averaged 300,819 barrels daily in the week ended June 17, according to their operation reports to NATIONAL PETROLEUM NEWS. This is the highest daily average since this publication has been gathering reports from this group of refiners.

The next highest average was in the week ended Sept. 24, 1926, when the total was 298,554 barrels. The highest previous average in 1927 was in the week ended May 20, when the total was 287,577 barrels.

In week ended June 3, the same group had reduced crude throughout to 256,361 barrels. The following week an increase of approximately 22,000 barrels was made and last week's increase was about the same

Summary for the Month

Production and shipments, all reporting refineries, for four weeks ended June 17. Change in stocks figured from May 20.

GASOLINE

	Gallons
Production	139,386,000
Shipments	150,663,000
Net change in stocks	—11,277,000
Ratio sales to production	108.1%

KEROSENE

	Gallons
Production	25,161,000
Shipments	23,308,000
Net change in stocks	+1,853,000
Ratio sales to production	92.6%

STOVE DISTILLATE

	Gallons
Production	3,956,000
Shipments	3,612,000
Net change in stocks	+344,00
Ratio sales to production	91.3%

GAS OIL

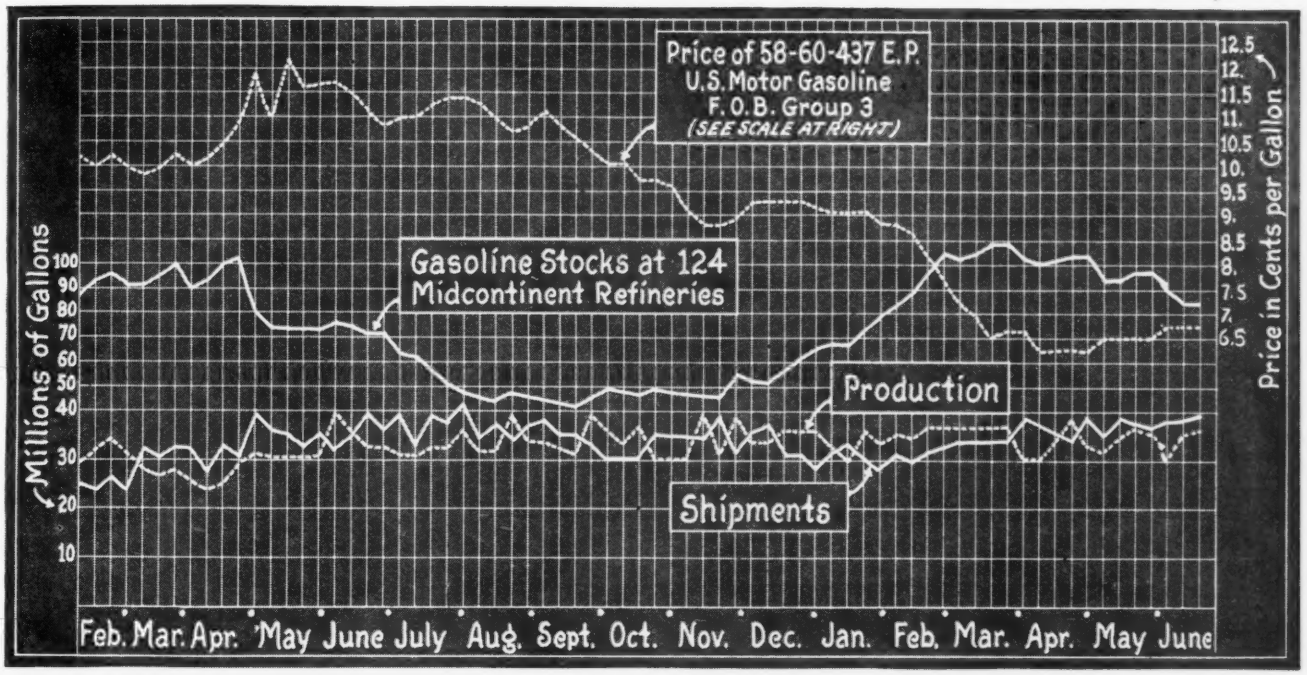
	Gallons
Production	30,440,000
Shipments	25,186,000
Net changes in stocks	+5,254,000
Ratio sales to production	82.7%

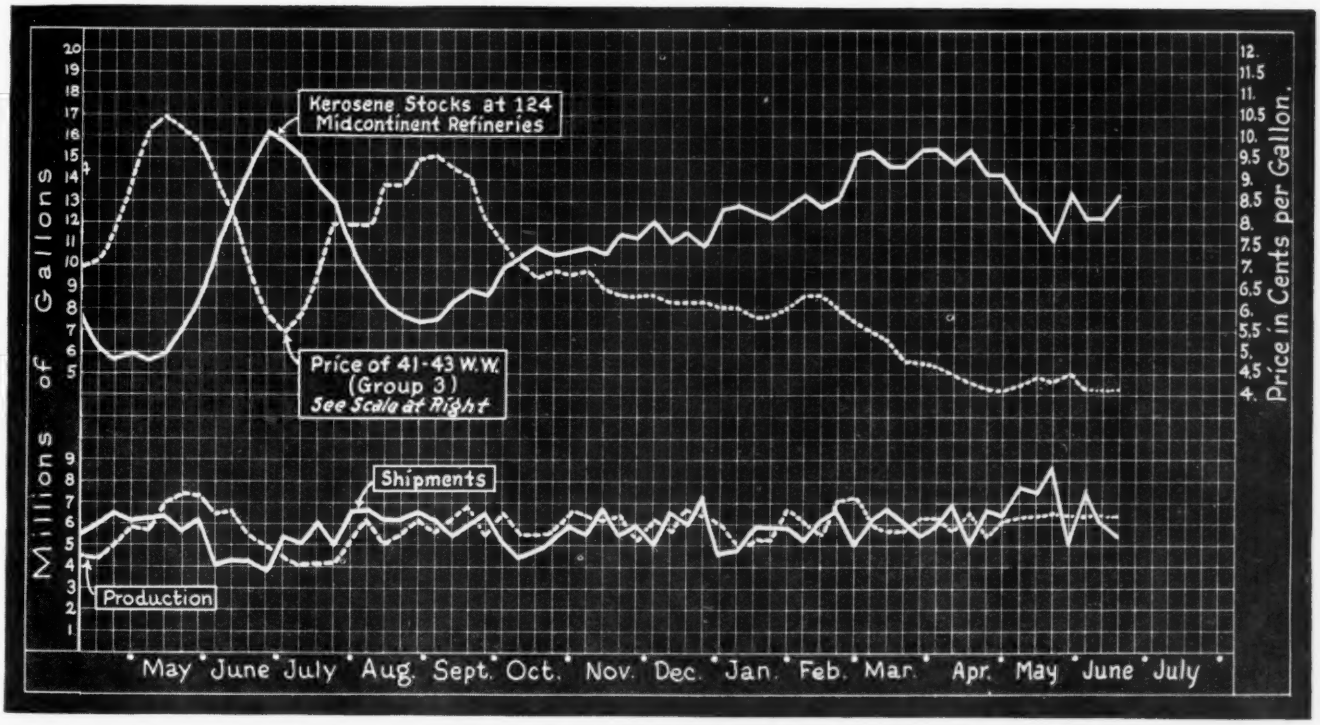
FUEL OIL

	Gallons
Production	115,704,000
Shipments	110,845,000
Net changes in stocks	+4,859,000
Ratio sales to production	95.8%

Barometer of Mid-Continent Refinery Market—Week Ending June 17

Charted Course of Prices, Production, Shipments, Stocks of Principal Refined Products, Week by Week, From Reports Made by 124 Plants to National Petroleum News


Price of 58-60-437 E.P.
U.S. Motor Gasoline
F.O.B. Group 3
(SEE SCALE AT RIGHT)
Gasoline Stocks at 124
Midcontinent Refineries
Production
Shipments
Millions of Gallons
Price in Cents per Gallon
Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June


Kerosene Stocks at 124
Midcontinent Refineries
Price of 41-43 W.W.
(Group 3)
See Scale at Right
Shipments
Production
Millions of Gallons
Price in Cents per Gallon.
May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July

volume making a total increase of approximtaely 45,000 barrels daily average in the last two weeks.

Texas refiners set the pace with an increase of 14,000 barrels daily average. Kansas refiners increased runs 3,200 barrels and Oklahoma 6,000 barrels but Arkansas-Louisiana refiners reduced runs approximately 1,200 barrels.

Other oil charges were increased slightly in Kansas, almost 3,000 barrels daily average in Oklahoma, slightly in Texas and reduced in Arkansas-Louisiana.

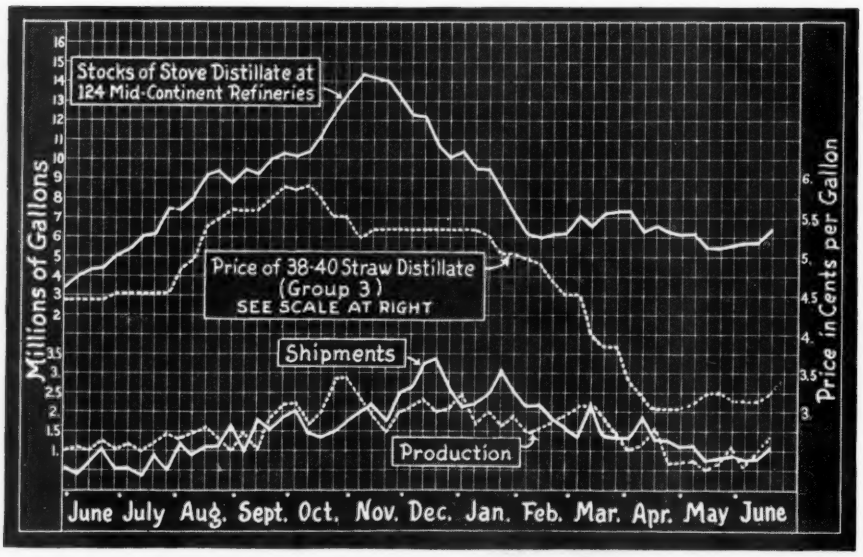
Increased crude runs resulted in a gasoline production increase of approximately 1,000,000 gallons. Shipments were 39,005,000 gallons, however, an increase of 1,200,000 gallons over the week ended June 10, resulting in a draft of 2,000,000 gallons on stocks. Stocks totaled 86,010,000 gallons June 17.

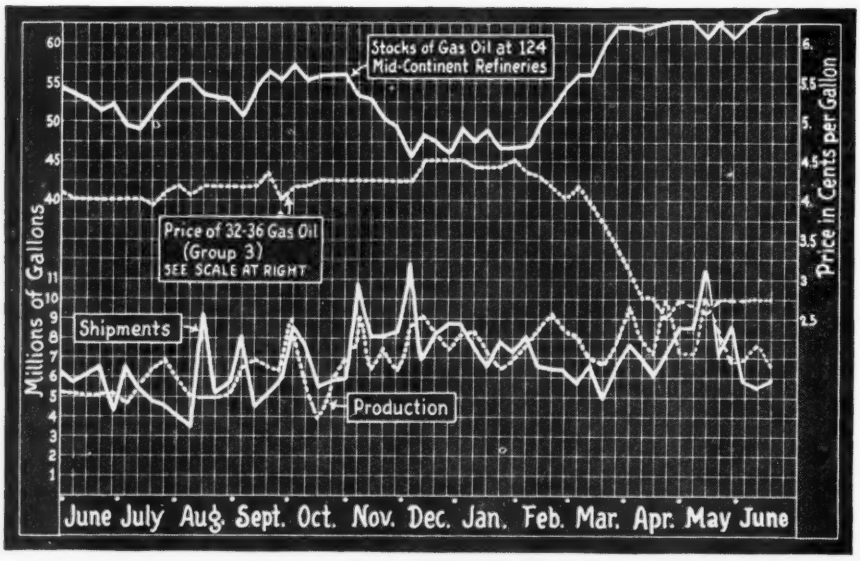
Crude charges for the corresponding week a year ago were 292,116 barrels daily average with a gasoline production of 35,959,000 gallons and shipments for the week of 37,790,000 gallons. Stocks totaled 73,963,000 gallons at end of that week.

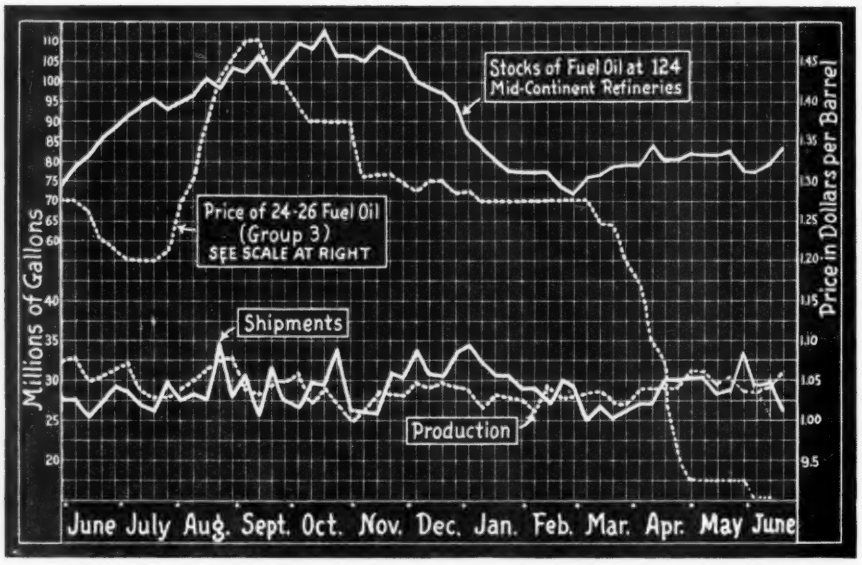
Kerosene production was off approximately 200,000 gallons last week and shipments were off approximately 600,000 gallons. Stocks were increased 700,000 gallons. Texas refiners were the only ones to move more than their output.

Barometer of the Mid-Continent Refinery Market

Week ending June 17


Stocks of Stove Distillate at 124 Mid-Continent Refineries
Price of 38-40 Straw Distillate (Group 3) SEE SCALE AT RIGHT
Shipments
Production
Millions of Gallons
Price in Cents per Gallon
June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June


Stocks of Gas Oil at 124 Mid-Continent Refineries
Price of 32-36 Gas Oil (Group 3) SEE SCALE AT RIGHT
Shipments
Production
Millions of Gallons
Price in Cents per Gallon
June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June


Stocks of Fuel Oil at 124 Mid-Continent Refineries
Price of 24-26 Fuel Oil (Group 3) SEE SCALE AT RIGHT
Shipments
Production
Millions of Gallons
Price in Dollars per Barrel
June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June

Automobile Production and Sales Slacken

NEW YORK, June 18.—*Automotive Industries* this week said:

The curtailment in automobile production this month, although to some extent a normal seasonal development, has been accentuated by a pronounced slowing up in sales. This is attributed to Ford's announcement of an impending new model, as the lower priced classes have been affected most by the current apathy of buyers.

In most quarters it is confidently expected that the late summer this year will show a big sales expansion comparable to that of a year ago. Once uncertainty over new models is disposed of, it is held, the market will receive a marked stimulus.

Fieldner Chief Engineer of Bureau Stations

WASHINGTON, June 20.—Arno C. Fieldner, for six years superintendent of the Bureau of Mines Experiment station at Pittsburgh and recognized as one of the bureau's outstanding research specialists, has been appointed chief engineer of the division of experiment stations of the bureau, effective July 1.

In his new position, Mr. Fieldner will correlate the scientific activities of the bureau's experiment stations which are located at Pittsburgh, Salt Lake City, Reno, Nev., Berkeley, Cal., Tucson, Ariz., Seattle, Wash., Bartlesville, Okla., Rolla, Mo., Minneapolis, Birmingham, Ala., and New Brunswick, N. J.

Mr. Fieldner was born in Ohio in 1881 and graduated in chemical engineering from Ohio State University in 1906. In 1907 he joined the staff of the U. S. Geological Survey and with that organization and later with the Bureau of Mines, engaged in research, performing notable work in connection with the utilization of coal, coke, petroleum and other fuels.

During the war Mr. Fieldner was a major in the Chemical Warfare Service and was in charge of gas mask research. Methods he developed for testing the efficiency of gas masks were used in our army and some of the allied armies.

He has made many valuable contributions to scientific literature. He organized and directed the research work of the Bureau of Mines in cooperation with the New York and New Jersey tunnel commission on the problem of safe concentration of carbon monoxide in tunnel atmospheres.

The Relay Motors Corp., Wabash, Ind., has put out a bulletin in colors describing and illustrating its truck, of which the chief feature is the special drive.

THE M.W. KELLOGG CO.

The construction of new equipment is a burden too often added to the heavy load borne by a refinery's operating force. Our business is to assume the responsibility for the design, manufacture and erection of refinery equipment.

We do not consider our work complete until we have successfully operated the equipment which we have erected.

The Cross Cracking Process—Pipe Stills—Bubble Towers—Heat Exchangers—Gray Treating Towers

The M. W. Kellogg Co.

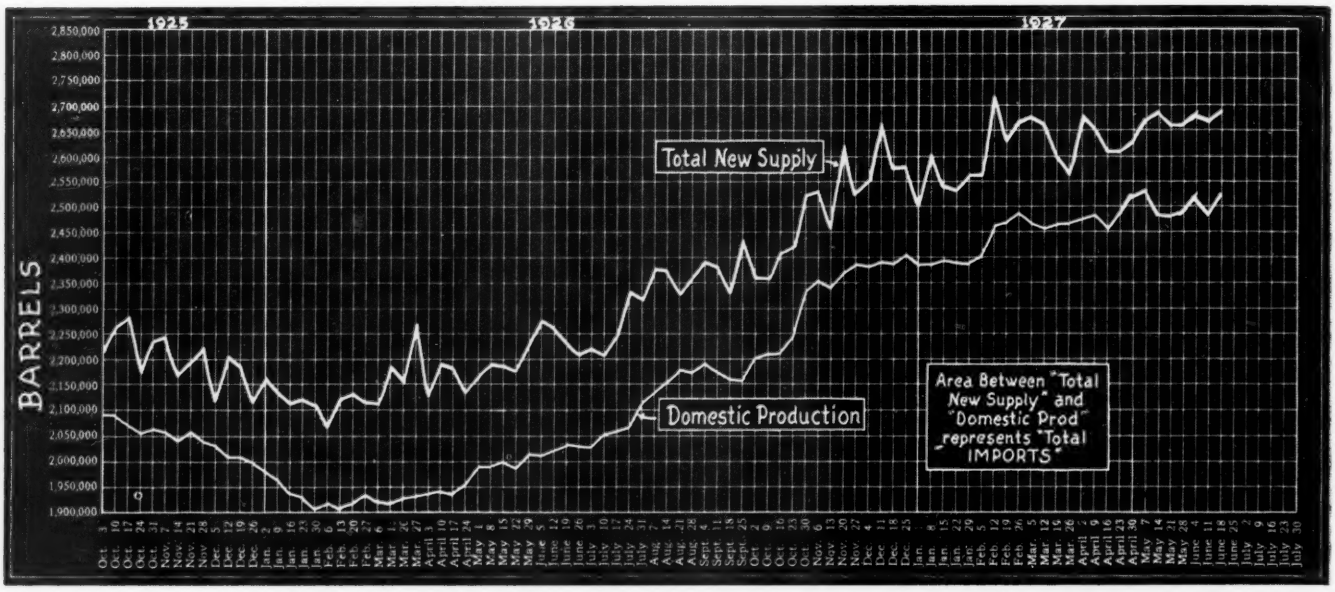
7 Dey St.

New York City

Branch Offices:

700 Baltimore Ave., Kansas City, Mo.
444 Market St., San Francisco, Calif.
1019 Hellman Bank Bldg., Los Angeles, Calif.

Daily Average Crude Oil Production and Imports



Daily average gross output of United States, by fields, for week ending with dates below as compiled by American Petroleum Institute

PRODUCTION SUMMARY

	June 18	June 11
Production east of Rockies	1,863,650	1,854,650
Increase		9,000
Total Production in U. S.	2,509,650	2,498,450
Increase		11,200
Crude Oil Imports	169,854	168,714
Increase		1,140
Total Crude Supply	2,679,504	2,667,164
Increase		12,340

OKLAHOMA

North Braman	4,750	4,850
South Braman	3,450	3,700
Blackwell	3,750	3,750
Hubbard	6,500	6,600
Thomas	4,950	5,100
Tonkawa	21,750	21,650
Garber	14,050	14,250
Burbank	44,150	45,700
Osage, outside Burbank	32,050	32,350
Watchorn	1,950	2,400
Cushing	21,400	21,450
Yale Jennings	11,500	11,550
Davenport	3,250	3,300
Bristow-Slick	26,650	26,800
North Okmulgee	16,900	16,950
Lyons-Deaner	5,600	5,400
Stroud	800	1,050
Cromwell	13,000	13,000
Papoose	6,900	7,150
Wewoka	19,750	18,750
Seminole	311,700	298,300
Earlsboro	67,800	64,050
Duncan district	6,950	7,000
Graham	7,850	7,850
Fox	1,850	1,850
Healdton	14,850	14,900
Hewitt	10,000	10,000
Scholem-Alechem	16,800	16,850
Others	64,850	64,150
Total Oklahoma	765,750	750,700
Increase		15,050

KANSAS

Greenwood County	36,600	37,000
Florence-Covert	1,800	1,800
Peabody-Elbing	3,750	3,750
Eldorado-Towanda	13,700	13,700
Augusta-Fox-Bush	4,450	4,400
Rainbow Bend	2,300	2,350
Russell	2,900	2,950
Churchill	18,350	18,400
Others	28,400	28,400
Total, Kansas	112,250	112,750
Decrease		500

NORTH LOUISIANA

Homer	5,050	5,100
Haynesville	7,750	7,800
Caddo, light	10,150	9,700
Caddo, heavy	4,750	4,850
De Soto, Red River	4,050	3,850
Elm Grove	700	700
Bellevue	1,300	1,350
Cotton Valley	5,750	5,750
Urania	9,150	8,600
Pleasant Hill	650	650
Total, North Louisiana	49,300	48,350
Increase		950

ARKANSAS

El Dorado	6,200	6,250
Smackover, light	11,050	11,200
Smackover, heavy	88,550	87,500
Stephens	1,400	1,400
Nevada	1,450	1,450
Lisbon	3,800	3,800
Others	150	150
Increase		850
Total, Arkansas	112,600	111,750

TEXAS (OUTSIDE GULF COAST)

Panhandle District

	June 18	June 11
Hutchinson County	99,600	102,700
Carson County	11,500	12,300
Gray County	11,950	12,050
Wheeler County	2,300	2,450
Others	100	50
Total, Panhandle District	125,450	129,550
Decrease		4,100

North Texas

Burkburnett	12,700	12,950
Electra	13,150	13,300
Iowa Park and K-M-A	3,200	3,400
Wilbarger	13,100	13,250
Archer County	30,150	30,300
Montague-Cooke	14,000	14,050
Others	850	850
Total, North Texas	87,150	88,100
Decrease		950

West Central Texas

Stephens County	8,850	8,900
Eastland-Desdemona	8,350	7,200
Brown County	28,850	29,050
Coleman County	1,150	1,200
Callahan County	3,850	3,750
Shackelford County	10,300	11,300
Young County	8,900	8,400
Throckmorton County	2,550	2,950
Palo Pinto County	1,500	1,600
Others	1,150	1,200
Total West Central Texas	75,450	75,550
Decrease		100

West Texas

Jones County	2,200	2,300
Mitchell and Scurry Counties	3,600	3,700
Howard County	2,550	2,750
Reagan County	26,750	26,250
Crane and Upton Counties	72,700	70,850
Crockett Countdy	1,200	1,200
Pecos County	5,000	9,750
Others	3,250	3,300
Total, West Texas	117,250	120,100
Decrease		2,850

East Central Texas

	June 18	June 11
Mexia	10,500	10,850
Currie	600	600
Richland	1,500	1,050
Wortham	3,400	3,450
Corsicana-Powell	17,150	17,600
Nigger Creek	3,850	3,950
Total East Central Texas	36,650	37,500
Decrease		850

Southwest Texas

Luling	16,150	16,300
Lytton Springs	1,950	2,000
Somerset	1,200	1,200
Laredo District	12,900	13,750
Piedras Pintas	50	50
Others	600	600
Total, Southwest Texas	32,850	33,900
Decrease		1,050
Total, Texas (Outside Gulf Coast)	474,800	484,700
Decrease		9,900

GULF COAST

Coastal Texas

	June 18	June 11
West Columbia	9,950	9,850
Damon Mound	900	950
Big Creek	4,100	4,200
Boling	2,050	2,050
Blue Ridge	4,000	3,050
Pierce Junction	7,950	7,750
Humble	3,500	3,600
Goose Creek	8,550	8,350
South Liberty	3,100	3,000
Hull	18,550	18,050
Saratoga	1,200	1,250
Batson	1,300	1,350
Sour Lake	4,550	4,500
Spindletop	58,050	56,050
Orange County	5,500	5,600
Others	4,100	4,400
Total, Coastal Texas	137,350	134,000
Increase		3,350

Coastal Louisiana

Vinton	5,000	5,050
Lockport	6,850	7,000
Evangeline	1,000	1,000
Edgerly	1,100	1,250
Others	1,000	1,050
Total, Coastal Louisiana	14,950	15,350
Decrease		400
TOTAL, GULF COAST	152,300	149,350
Increase		2,950

ROCKY MOUNTAIN

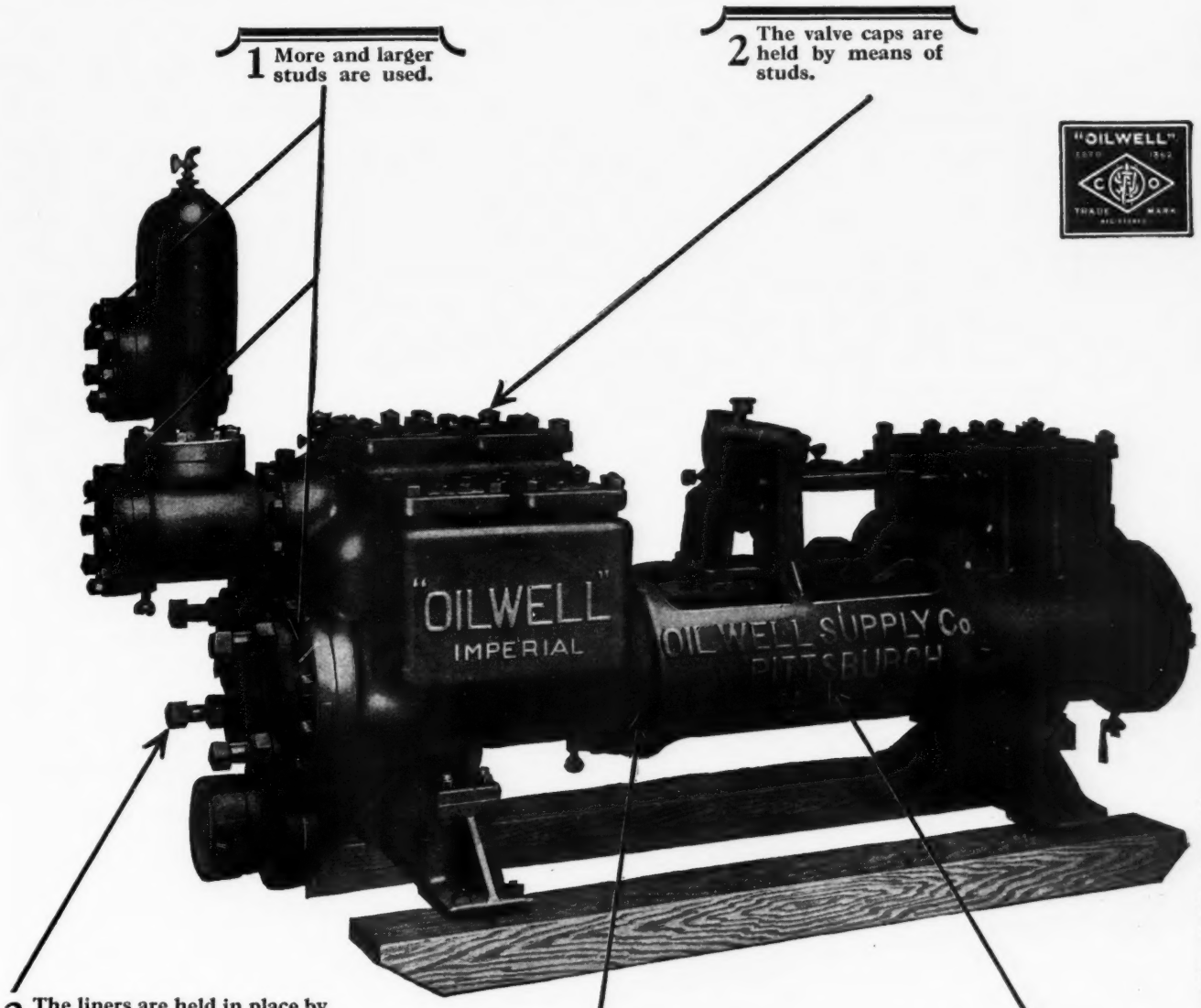
Wyoming

	June 18	June 11
Salt Creek	41,500	42,950
Grass Creek	2,600	2,700
Elk Basin	1,000	900
Big Muddy	2,800	2,700

(*Continued on page* 40)

Good "Mud Hogs" Are Now Made Better

WHEREVER Rotary Drilling is practiced, **"OILWELL"** "Mud Hog" Pumps have always been known as Good "Mud Hogs." In the Imperial "Mud Hogs" now being furnished, the Good "Mud Hogs" are made better because:


1 More and larger studs are used.
2 The valve caps are held by means of studs.
"OILWELL"
IMPERIAL
OIL WELL SUPPLY Co.
PITTSBURGH
3 The liners are held in place by adjusting screws which permit tightening of liners from the outside of the cylinder heads.
4 The piston rod stuffing boxes are replaceable.
5 The cradle has been strengthened.

The Imperial "Mud Hog" Pump is designed for a working pressure of 800 lbs. and the Imperial "Giant Mud Hog" Pump for a working pressure of 1,000 lbs. Both pumps can be furnished in steam driven or power driven types.

Inquire at Any of Our 100 Branches

OIL WELL SUPPLY CO.

NEW YORK—LOS ANGELES—PITTSBURGH, U.S.A.—SAN FRANCISCO—TAMPICO—LONDON

WORLD'S OLDEST AND LARGEST MANUFACTURERS OF OIL FIELD EQUIPMENT

OIL BOTTLE SPOUTS and CARRYING TRAYS

for use on standard milk bottles or screw top jars. A convenient and profitable line for jobbers as it is not necessary to carry the bottles.

Our inside fastening spout is illustrated and fits any dairy bottle U. S. or foreign.

Our special design carrying trays are substantial and ornamental. Enameled red. ***Jobbers Wanted.***

C. C. VAN TINE
Bartlesville, Okla.

SHIP TODAY!

We make every shipment the same day we receive the order. Come to Emerson-Scheuring for direct service and decided savings in time and money. All tanks electric Arc Welded.

BULK STORAGE TANKS

8,200 gallon tank — shipping weight, 8,000 pounds; length, 21'-8" on shell.

10,200 gallon tank — shipping weight, 9,500 pounds; length, 27'-6" on shell.

12,000 gallon tank — shipping weight, 10,750 pounds; length, 31'-6" on shell.

Also Splendid Prices on 120" Diameter Tanks

All seams lapped and ARC WELDED. Shell, ¼" plate. Heads, 5/16" plate, semi-dished. Manheads and openings without extra charge. FREIGHT ALLOWANCE UP TO 30 CENTS PER 100 LBS., APPLIED AGAINST LISTED SHIPPING WEIGHT.

All Prices f. o. b. Indianapolis

EMERSON-SCHEURING TANK COMPANY
Indianapolis Indiana

(*Continued from page 38*)

Lost Soldier	3,400	3,350
Rock River	2,750	2,850
Lance Creek	700	450
Teapot Dome	800	800
Others	4,550	4,050
Total, Wyoming	59,650	60,750
Decrease		1,100
Montana		
Cat Creek	2,250	2,200
Sunburst	13,000	11,200
Others	200	200
Total, Montana	15,450	13,600
Increase		1,850
Colorado		
Moffatt (Craig)	1,700	1,700
Fort Collins	3,250	3,200
Florence	800	1,000
Others	1,600	1,500
Total, Colorado	7,350	7,400
Decrease		50
New Mexico		
Table Mesa	200	200
Artesia	700	1,700
Hogback	1,700	750
Rattlesnake	600	150
Total, New Mexico	3,200	2,800
Increase		400
Total, Rocky Mountain	85,650	84,550
Increase		1,100

CALIFORNIA	June 18	June 11
Santa Fe Springs	41,000	41,000
Long Beach	94,000	95,000
Huntington Beach	75,500	75,500
Torrance	23,500	23,500
Dominguez	16,500	17,000
Rosecrans	10,000	10,000
Inglewood	35,000	35,000
Midway-Sunset	89,500	89,500
Ventura Avenue	38,000	37,300
Seal Beach	74,000	68,000
Others	151,000	151,000
Total, California	646,000	643,800
Increase		3,800
EASTERN		
Including Ill., Ind., Ky., Ohio, W. Va., Pa., and N. Y.	111,000	112,500
Decrease		1,500

Californian is Secretary of Oil Safety Body

CHICAGO, June 18.—H. N. Blakeslee, formerly safety engineer of the industrial relations department, Associated Oil Co., San Francisco, has been appointed secretary of the petroleum section of the National Safety Council. He is the first engineer to work exclusively for one division of the accident prevention institution.

H. N. BLAKESLEE
First full time secretary of petroleum section of National Safety Council.

Mr. Blakeslee will make his headquarters at 108 E. Ohio St., Chicago, but will devote a considerable portion of his time to visiting industrial members throughout the country.

Mr. Blakeslee was educated at the University of Missouri and entered the oil industry in 1911 with the old Kern Trading & Oil Co. He joined the Associated Oil Co. in March, 1917.

Mr. Blakeslee was an active member of the Society of Safety Engineers of California which he served as secretary until he left the coast to accept the Chicago position.

Finish Final Hearing on Oil Freight Rates

Staff Special

TULSA, June 18—What is expected to be the final hearing in the general oil freight rate investigation was completed on June 16 at French Lick, Ind. The final hearing was begun on June 6 before Examiner John D. Keeler.

A large portion of the 10-day hearing was occupied with testimony of witnesses for the Central Freight Association and New England carriers. Both of these groups of railroads were agreed that rates from the Mid-Continent field to the northeastern states should be made on the basis of a full combination of local rates from and to the Mississippi river.

An important point was won by the Mid-Continent group when a representative of the Illinois Central railroad admitted that his company takes pipe line rates into consideration in fixing rail rates. He testified that the rate from New Orleans to Cincinnati over the I. C. was made to equal the pipe line rate from Oklahoma to St. Louis plus the refined oil rates from St. Louis to Cincinnati.

D. W. Moffitt, vice president of the Mid-Continent Petroleum Corp., was a witness for the Mid-Continent refiners on competitive conditions in the industry. George D. Locke, vice president of the Barnsdall Refining Co., and F. D. Applegate, sales manager for the Marland Refining Co., were present to testify along the same lines but were not called by the examiner, since an effort was made to hurry the hearing.

A. V. Bourque, secretary of the Association of Natural Gasoline Manufacturers, presented a chart showing the growth of production of vapor recovery gasoline at refineries to substitute for natural gasoline. Figures were those gathered by NATIONAL PETROLEUM NEWS.

New All-Time Production Peaks Set At Seminole And In Oklahoma

By Paul Wagner

N. P. N. STAFF WRITER

TULSA, June 18

PEAK production levels in the Greater Seminole district gave way to new high levels in four consecutive days this week, and Oklahoma's total daily average also reached an all-time record of 765,240 barrels.

Earlier peaks for both the state and the Seminole district had been set in the week ended June 4, last. At that time Oklahoma averaged 751,070 barrels daily; the Seminole district had reached what then was its one-day record of 373,182 barrels.

Although the Bowlegs area increased from 151,579 barrels June 12, to 160,576 barrels June 16, an even greater production climb came from the northeastern part of the Earlsboro deep pay development. The completion of phenomenal wells by the Prairie, Barnsdall and Empire companies shot production upward to 84,468 barrels June 18, as compared with the week's low of 56,904 barrels June 14.

Greater Seminole district peaks pyramided on top of themselves as follows:

Date	Barrels
June 15	378,650
June 16	381,956
June 17	384,659
June 18	394,620

The largest well of all the Earlsboro deep pay completions was that of Empire Gas & Fuel Co. in the southeast of the southwest of 3-9-5, which made 2350 barrels the first six hours in pay at 4255-4261 feet, afterwards increasing its flow to about 11,000 barrels daily. The Empire well is three-quarters of a mile northeast and a similar distance east of production in the northern part of the Earlsboro deep pay area. It is northwest of Magnolia production in sec. 11, referred to in the third column of an article on page 19, June 15, 1927, issue of NATIONAL PETROLEUM NEWS.

Magnolia big wells mentioned in the foregoing paragraph are on the Sparks and Holmsley properties which were producing, respectively, 7386 and 5186 barrels daily.

A half-mile northeast of the Magnolia Sparks and diagonally across a 40-acre lease northwesterly from the Magnolia's other big well, the Prairie Oil & Gas Co. brought in its No. 1 Ruth Stidham, in the southwest corner of the northeast of 11-9-5, making 180 barrels an hour from the Wilcox pay at 4297-4317 feet. A south offset drilled by Barnsdall Oil Co., its No. 1 Davis, in the northwest corner of the southeast of 11-9-5, started off at 170 barrels an hour in Wilcox pay at 4302-4319 feet.

All the foregoing completions add extensions northerly or easterly to the Earlsboro deep pay area and indicate the flush productivity of considerable additional ground in their respective sections.

DIFFICULTIES found in tabilizing production in the Greater Seminole district are discussed in a bulletin issued to operators by Umpire Ray Collins who said:

"We have eliminated a great deal of intensive drilling and natural competition through cooperation and agreements. The Prairie have a well in 24-9-5, which they have pinched in to 75 barrels, thus allowing the offset leases to pay one-eighth royalty and thereby stopping the drilling of seven to 10 wells. The Gypsy Oil Co. have a well in 33-8-6, which they have pinched in to 75 barrels, thus stopping the drilling of 15 to 20 wells. Barnsdall Oil Co. have shut down at 4152 feet in 22-7-6. The Indian Territory Illuminating Oil Co. have shut down at 4097 feet in 16-8-5. Gypsy Oil Co., in 5-8-6, are to shut down in the Viola lime. The Prairie are to pinch in their wells or produce from the Hunton lime in secs. 17, 22, and 30-10-6.

"If any of the foregoing wells were drilled into the Wilcox sand and made good producers there would be from 5 to 20 wells started in each place.

"The Indian Territory Illuminating Oil Co. have shut down on top of the Wilcox sand in 1-7-6. An agreement limiting the production to 100 barrels per well is being worked out among the producers in this area.

"In addition to the wells mentioned there are other promising looking wildcats that will be reaching the Wilcox sand in the next 60 days and,

(*Continued on Page* 44)

Drilling Operations in Oklahoma, Kansas and Texas

	June 18 — Week Ended					June 11				
	Loc.	Rigs.	Drg.	S.D.	Total	Loc.	Rigs.	Drg.	S.D.	Total
OKLAHOMA										
Burbank	..	3	12	7	22	..	4	15	6	25
Other Osage	6	7	23	5	41	6	8	24	5	43
Bristow-Cushing	2	7	52	8	69	6	7	50	10	73
North Oklahoma	2	8	71	48	129	3	8	75	37	123
South Oklahoma	8	16	145	35	204	10	14	148	40	212
Muskogee	..	5	14	25	44	..	10	21	16	47
Okmulgee-Bristow	5	41	68	17	131	6	40	74	19	139
Tonkawa	1	..	6	1	8	..	4	3	1	8
Seminole Dist.	28	40	534	44	646	30	39	546	44	659
Total Oklahoma	52	127	925	180	1,284	61	134	956	178	1,329
KANSAS	34	52	127	78	291	38	55	121	79	293
TEXAS										
Central	..	114	233	169	516	..	116	238	182	536
East	..	7	9	2	18	..	..	7	9	16
Panhandle	..	107	201	94	402	..	114	202	97	413
N. Central	..	41	93	31	175	..	40	99	35	174
West	..	79	159	67	305	..	86	125	69	307
Laredo	..	..	..	..	..	..	1	34	17	52
Total Texas	..	341	690	370	1,401	..	357	730	409	1,498
GRAND TOTAL	86	520	1,742	628	2,976	99	546	1,809	666	3,120

Completions in North Louisiana and Arkansas, Week Ended June 18, 1927

LOUISIANA

Caddo Parish—Vivian District

Company	Well	Location	Depth	Yield
Luby Oil Co.	Levee Board No. 16	23-22-15	1040	20

Caddo Parish—Caddo District

Standard Oil Co. of Louisiana	J. J. Hart No. 13	34-21-16	1823	40

Caddo Parish—Blanchard

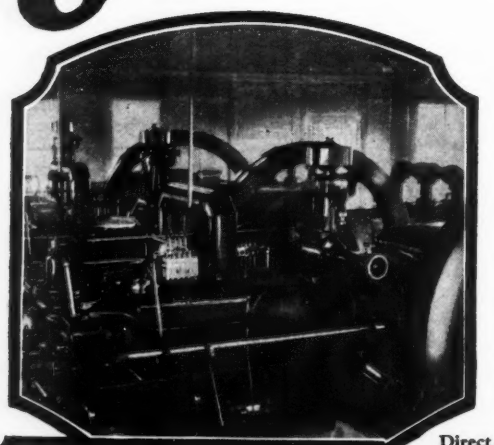
B. A. Hardey, trustee	Trosper No. 1	35-15-16	895	15m gas

Sabine Parish—Pleasant Hill

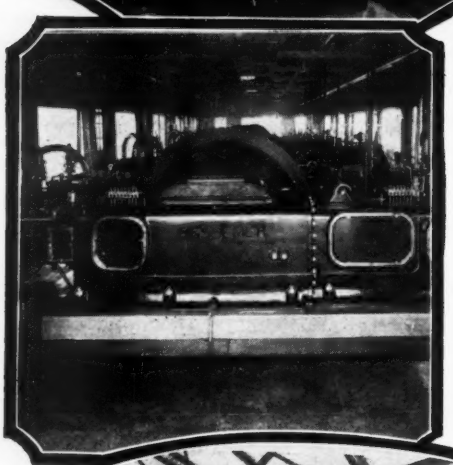
La. Oil Refining Corp.	Logan Oil Co. No. 1	28-10-12	3244	65

Company	Well	Location	Depth	Yield
Urania—LaSalle Parish				
La. Oil Ref. Corp.	Tremont B-1	30-10-2E	1582	10
Ouachata Parish				
Cons. Carbon Co.	White No. 1	16-20-4E	2147	25m gas
Palmer Corp.	Millsaps No. 4	36-20-4E	2190	25m gas
Jordan Drilling Co.	Montgomery No. 2	13-18-4E	2238	4m gas
Arkansas—Smackover				
Middlesex Oil Co.	Shirey No. 5	36-15-17	2305	35
S. Richardson, trustee	Lawton No. 5	10-16-15	2690	10m gas
L. M. Vaughan, trustee	Ezzell No. 1	12-17-15	2153	50
Urbana—Union County				
Sun Company	Thompson No. 1	10-18-13	2657	20m gas

For *Gasoline Plants, Booster Stations and for Flowing Wells*



Direct driven Bessemer Compressors in an Oklahoma Natural Gas Co. booster station.



An installation of 200 H. P. Bessemer Four-Cycle Compressor in the Rosecrans plant of the Industrial Fuel Supply Company

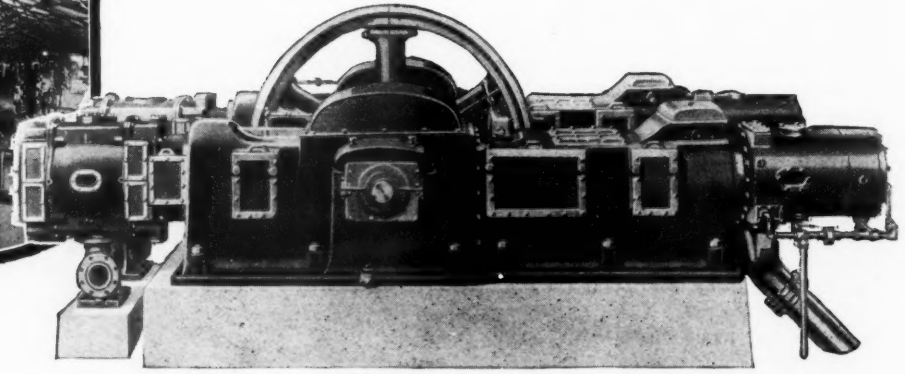
Bessemer Type Ten Compressors in the Strothers blowing plant of the Pure Oil Co.

NO MATTER what service you may have for a compressor, you must have compression efficiency, high average running time and low maintenance and operating cost to make your compressor investment a profitable one.

The reason there are so many Bessemer Compressors in service today is simply because Bessemers have proved their greater value by actual performance in all types of service, under all field operating conditions.

The Bessemer average of 99%+ running time is consistently maintained in gasoline plants, booster stations and for flowing wells. Their maintenance cost is invariably lower, their life of service longer and their depreciation less. Any Bessemer compressor user will tell you convincingly why Bessemers are better. Ask one.

THE BESSEMER GAS ENGINE COMPANY
70 York Street :: :: Grove City, Pa.



BESSEMER

TWO-CYCLE AND FOUR-CYCLE COMPRESSORS

Seminole District Production by Companies and Leases, June 17 and June 10, 1927

Company	Farm	S.T.R.	June 17 No. Wells	June 17 Prod.	June 10 No. Wells	June 10 Prod.
BOWLEGS						
Amerada	Rascoe	15- 8-6	8	10,020	8	10,115
Atlantic	Fleet	23- 8-6	2	2,410	2	4,425
Atlantic	Jones	16- 8-6	2	729	2	1,108
Atlantic	Baker	10- 8-6	2	3,547	2	4,878
Total Atlantic			6	6,686	6	10,311
Barnsdall	McNac	28- 8-6	1	40	1	0
Barnsdall	Murrow	11- 8-6	1	124	1	242
Total Barnsdall			2	164	2	242
Carter	Bowlegs		2	4,895	0	0
Carter	Harjoche	15- 8-6	4	5,700	4	5,595
Carter	Walker	15- 8-5	1	2,750	1	3,000
Carter	Wise	23- 8-5	4	9,585	4	5,815
Total Carter			11	22,930	9	19,605
Empire	Lacey	11- 8-6	4	6,581	4	6,644
Gypsy	Brown	33- 8-5	1	105	1	107
Gypsy	Walker	15- 8-6	6	4,415	5	4,280
Total Gypsy			7	4,520	6	4,387
Independent	Coker	21- 8-6	1	1,180	0	0
I. T. I. O.	Davis	13- 8-6	2	3,174	2	3,492
I. T. I. O.	Goforth	15- 8-6	9	13,643	8	10,239
I. T. I. O.	Livingston	15- 8-6	8	13,568	8	11,294
I. T. I. O.	Walker	15- 8-6	7	12,322	6	7,943
I. T. I. O.	Wilmont	15- 8-6	3	5,380	3	5,610
I. T. I. O.	Youngblood	24- 8-6	3	3,126	2	3,378
Total I. T. I. O.			32	51,213	29	43,311
McCulloch	Bowlegs	22- 8-6	1	30	1	0
Mid-Continent	Baker	10- 8-6	2	3,747	2	1,511
Mid-Continent	Hutke	24- 8-6	1	445	1	60
Total Mid-Continent			3	4,192	3	1,571
Minnehoma	Bowlegs	15- 8-6	2	1,752	1	2,236
Prairie	Gahagan	23- 8-6	1	2,260	1	2,740
Prairie	Harber	10- 8-6	3	6,260	3	5,076
Prairie	Whitley	23- 8-6	2	1,030	2	740
Total Prairie			6	9,550	6	8,555
Pure	Reed	14- 8-6	10	16,701	9	10,071
Roxana	Taylor	16- 8-6	4	1,419	4	814
Shaffer	Lacey		2	2,645	0	0
Sinclair	Adam	22- 8-6	1	40	1	50
Sinclair	Bowlegs	22- 8-6	1	405	1	430
Sinclair	Ellen	11- 8-6	1	2,420	1	1,735
Sinclair	Harjo	14- 8-6	3	5,005	3	4,475
Sinclair	Jones	8- 8-6	1	1,015	1	2,185
Sinclair	Taylor	10- 8-6	1	2,190	1	2,305
Sinclair	Walker	22- 8-6	2	4,305	2	4,260
Total Sinclair			10	13,380	10	13,660
Texas	Reed	14- 8-6	2	4,942	2	5,855
Tidal	Harjoche	10- 8-6	1	1,500	1	1,650
TOTAL BOWLEGS			112	159,405	104	140,152
EARLSBORO						
Amerada	Anderson	15- 9-5	3	6,082	3	6,515
Amerada	Cowden	4- 9-5	1	5,101	1	5,330
Total Amerada			4	11,183	4	11,845
Barnsdall	D. Davis		1	1,842	0	0
Barnsdall	M. Davis		1	700	0	0
Barnsdall	Gibson	9- 9-5	1	3,147	0	0
Barnsdall	Savolka	15- 9-5	1	4,620	1	4,559
Barnsdall	Smith	15- 9-5	1	700	1	679
Barnsdall	Peter	10- 9-5	1	289	1	438
Total Barnsdall			6	11,298	3	5,876
Crosbie	Bryant	9- 9-5	1	5,205	1	5,275
Gypsy	Bora	16- 9-5	1	0	1	0
Gypsy	Earl	16- 9-5	1	0	1	0
Gypsy	McFarland	9- 9-5	2	865	2	1,177
Gypsy	Peter	10- 9-5	2	2,212	2	3,192
Gypsy	State	16- 9-5	4	5,580	4	5,835
Total Gypsy			10	8,657	10	10,204
Independent	Knappen	8- 9-5	1	2,006	1	2,068
Interocean	Payne		1	540	0	0
Magnolia	Bryant	9- 9-5	2	5,947	2	6,773
Magnolia	Holmsley	11- 9-5	1	5,166	1	6,044
Magnolia	Simpson		1	1,212	0	0
Magnolia	Sparks	11- 9-5	2	7,386	2	7,891
Total Magnolia			6	19,731	5	21,308
Mid-Continent	McCumber	9- 9-5	2	4,495	2	3,610
Phillips	Graham	9- 9-5	4	1,375	3	2,377
Philmack	Dobbs	9- 8-5	2	510	2	877
Prairie	Baker	24- 9-5	1	265	1	300
Prairie	Stidham		1	3,560	0	0
Sinclair	Foreman	18- 9-5	1	0	1	0
Shallow Sand			29	3,975	30	4,080
TOTAL EARLSBORO			70	70,100	65	66,020
SEMINOLE						
Amerada	Fixico	23- 9-6	4	2,104	4	1,659
Amerada	Killing	23- 9-6	4	479	4	490
Amerada	Rentie	23- 9-6	4	1,429	4	1,495
Total Amerada			12	4,012	12	3,644
Atlantic	N. Cudjo	26- 9-6	4	900	4	245
Atlantic	J. Cudjo	36- 9-6	2	0	2	0
Total Atlantic			6	900	6	245
Barnsdall	Carter	24- 9-6	9	4,879	9	5,142
Barnsdall	Jones	34- 9-6	4	1,929	4	2,034
Total Barnsdall			13	6,808	13	7,176
Carter	B. Carter	24- 9-6	2	230	2	215
Carter	J. Carter	24- 9-6	4	80	4	60
Carter	F. Carter	24- 9-6	3	500	3	585
Carter	R. Cudjo	35- 9-6	4	2,330	3	1,855
Carter	W. Cudjo	34- 9-6	1	420	1	505
Carter	Gilliland	27- 9-6	1	625	1	655
Carter	Grisso	23- 9-6	8	1,450	8	1,435
Carter	Knapp	13- 9-6	3	1,432	3	1,395
Carter	Killing	34- 9-6	13	18,105	12	20,197
Carter	Lukes	27- 9-6	6	3,685	6	3,935
Carter	Simpson	35- 9-6	2	510	2	510
Carter	Strother	34- 9-6	2	5,175	2	5,700
Carter	Vierson	23- 9-6	4	1,330	4	1,485
Total Carter			53	35,872	51	38,532
Empire	Gross	25- 9-5	2	2,462	2	840
Empire	Wilson	34- 9-6	3	1,173	3	1,326
Total Empire			5	3,635	5	2,166
Gypsy	Butler	35- 9-6	3	1,238	3	1,147
Gypsy	Carter	24- 9-6	8	2,110	8	2,422
Gypsy	Cudjo		2	1,785	0	0
Gypsy	Fixico	26- 9-6	5	140	5	200
Gypsy	Harjo	25- 9-6	2	1,100	2	1,005
Gypsy	Wolf	26- 9-6	6	1,035	6	1,435
Total Gypsy			26	7,408	24	6,404
Independent	T. Fixico	26- 9-6	8	1,249	8	1,405
Indep.	P. Fixico	23- 9-6	4	500	4	345
Indep.	Harjo	25- 9-6	1	0	1	0
Indep.	Jones	26- 9-6	4	891	4	844
Total Independent			17	2,640	17	2,549
I. T. I. O.	Bowlegs	26- 9-6	10	4,433	10	4,207
I. T. I. O.	Goodin	23- 9-6	4	639	4	755
I. T. I. O.	Harjo	24- 9-6	4	672	4	731
I. T. I. O.	James	24- 9-6	4	1,080	4	1,088
I. T. I. O.	Marcy	13- 9-6	1	5	1	87
I. T. I. O.	Reed	24- 9-6	3	65	3	0
Total I. T. I. O.			26	6,894	26	6,868
Kingwood	Johnson	22- 9-6	5	2,537	5	2,608
Magnolia	Franks	25- 9-6	3	1,270	3	1,812
Mid-Continent	Rentie	14- 9-6	9	1,920	9	2,065
Mid-Continent	Tayeche	24- 9-6	7	540	7	505
Total Mid-Continent			16	2,460	16	2,570
Mid-Kansas	Johnson	25- 9-6	1	827	1	803
Mid-Kansas	Pressley	3- 8-6	1	0	1	0
Total Mid-Kansas			2	827	2	803
Philmack	Butler	35- 9-6	2	832	2	1,100
Phillips	Strother	27- 9-6	3	1,315	3	900
Prairie	Gross	25- 9-6	5	170	5	135
Prairie	Mason	13- 9-6	1	1,300	1	903
Prairie	Spencer	13- 9-6	1	25	1	25
Prairie	Strother	27- 9-6	8	2,335	8	2,365
Total Prairie			15	3,830	15	3,428
Pure	Strother	26- 9-6	17	3,318	17	3,696
Pure	B. Strother	36- 9-6	3	4,968	3	5,292
Total Pure			20	8,286	20	8,988
Roxana	Harber	22- 9-6	2	580	2	681
Roxana	Lashley	22- 9-6	2	208	2	244
Total Roxana			4	788	4	925
Sinclair	Carter	13- 9-6	2	35	2	40
Sinclair	Cudjo-A	35- 9-6	6	1,600	6	1,530
Sinclair	Cudjo-B	35- 9-6	3	997	3	1,040
Sinclair	Dicey	22- 9-6	1	675	1	440
Sinclair	Fixico	23- 9-6	4	830	4	703
Total Sinclair			16	4,137	16	3,750
Slick	Born	35- 9-6	1	0	1	0
Slick	Cudjo	35- 9-6	3	1,951	3	1,936
Slick	Franks	35- 9-6	8	2,022	8	2,665
Slick	Giblet	35- 9-6	1	1,702	1	2,040
Total Slick			13	5,675	13	6,643
Superior	Cudjo	35- 9-6	4	2,310	4	2,496
Texas	Mayhue	14- 9-6	1	32	1	30
Tidal	Carter	24- 9-6	5	2,520	5	2,865
Tidal	Fixico	26- 9-6	8	1,860	7	1,610
Tidal	Harjo	23- 9-6	7	225	7	170
Tidal	Mahardy	24- 9-6	5	1,085	5	1,160
Tidal	Tayeche	25- 9-6	2	2,205	2	2,445
Total Tidal			27	7,895	26	8,250
Turman	Cudjo	35- 9-6	4	706	4	1,235
Turman	Grisso	35- 9-6	1	509	1	579
Turman	Jones	34- 9-6	4	3,061	4	4,925
Total Turman			9	4,276	9	6,739
TOTAL SEMINOLE PROPER			298	114,638	295	118,671
SEARIGHT						
Carter	Davis	4- 9-6	5	8,430	5	9,425
Carter	Frazier	3- 9-6	4	8,305	4	8,135
Carter	Kiker	29- 9-6	1	40	1	40
Carter	Scott	26-10-6	1	40	1	40
Carter	Stewart	34- 9-6	1	0	1	0
Total Carter			12	16,815	12	17,640
Gypsy	Cudjo	4- 9-6	1	617	1	630
Mid-Cont.	Grayson	33-10-6	5	5,900	5	6,435
Mid-Cont.	Saloche	33-10-6	2	80	1	35
Total Mid-Continent			7	5,980	6	6,470
Prairie	Cannon	33 10-6	1	0	1	10
Prairie	Carter	10- 9-6	1	15	1	25
Prairie	Houck	30-10-6	1	10	1	15
Prairie	Kinkade	33-10-6	8	5,383	8	5,100
Prairie	Wiemer	22-10-6	1	35	1	40
Total Prairie			12	5,443	12	5,190
Pure	Aldridge	3- 9-6	2	970	2	973
Roxana	Strother	3- 9-6	1	3,851	1	214
Searight	Youngblood	33 10-6	2	0	2	0
Sinclair	Polly	3- 9-6	2	2,770	2	1,035
Twin State	Cudjo	4- 9-6	1	990	1	1,000
Wilcox	Chupco	4- 9-6	2	3,080	2	2,818
TOTAL SEARIGHT			42	40,516	41	35,970
GRAND TOTAL SEMINOLE DISTRICT			522	384,659	505	360,813

	Wells	Production	Avg. Per Well
Hunton Lime	56	8,600	153.6
Shallow Sand	30	3,990	133.0
Wilcox Sand	436	372,069	853.3

Completions in Oklahoma and Kansas, Week Ended June 18, 1927

OKLAHOMA

Company	Well No.	Location	Depth	Init. Prod.
Caddo County				
English Drlg.	5	C SE SE 31-6-9 W	2374-2383	35
Carter County				
Humble	14	NEc SW NW 19-1-3 W	2463-2999	185
Carter	4	SEc NE SE 21-2-3 W	2238-2244	55
Iowa	1	SEc NE SE 7-2-2 W	1725-2175	30
Cotton County				
Garvin et al	1	SEc 32-1-10 W	T.D. 4326	Dry
Creek County				
Farquean et al	1	Lot 8, Blk 25 6-18-12E	2190-2200	40
Cumberland	4	NEc SE SE 13-17-10 E	2374-2414	5M
Wright	19	NEc NW NW 24-17-10 E	2425-2536	35
Skelly	1	SEc NW NW 32-17-10 E	2678-2685	5400
Future	1	SEc NE SW NE 2-16-11-E	2662-2675	40
Mid Cont.	2	NEc NW SE 31-15-9 E	2294-2360	15
Mid Cont.	8	SEc SW NE 32-14-10 E	2790-2832	35
Grieves	1	NEc 13-19-8 E	2127-2191 OWD	38
Future Dev.	1	SWc NE NE 2-16-11E	T.D. 2665	Dry
Comanche County				
Abernathy et al	2	CWL NW NE 32-4-10 W	T.D. 2150	Dry
Green et al	1	C NE SW 14-1-12 W	T.D. 2300	Dry
Grady County				
Nicholos	3	Se NW NW 25-5-8 W	2160-236-	15M
Berry et al	2	C SE SE 3-4-8 W	2136-2186	11M
Carter	2	SEc NE SE 34-3-3 W	2030-2033	12M
Meridian	3	NEc SE 23-5-8 W	T.D. 3170	Dry
Carter	2	NWc SE NW 16-3-5 W	T.D. 2770	Dry
Hughes County				
Slick	1	NWc NE 30-9-9 E	T.D. 4420	Dry
Jefferson County				
Humble	1	SWc SE SE 9-7-5 W	T.D. 2044	Dry
Kay County				
Marland	1	SEc SW NE 1-26-2 W	3651-2665	130
Marland	2	SWc NE 1-26-2 W	3540-2601	828
Marland	1	NWc SW NW 7-26-1 W	2766-2783	41
Marland	1	NEc NW SE 9-25-2 W	4265-4282	3650
Prairie	10	NEc S½ SE 1-26-2 W	3872-2891	120
Prairie	1	SEC NE 19-27-1 W	3507-3513	8M
Marland	4	SEc NW NE 12-26-2 W	T.D. 2602 OWD	Dry
Nat'l U et al	2	NWc SW NW 6-26-1 W	T.D. 3975	Dry
Lincoln County				
Roxana	1	SWc NE NW 31-17-4 E	3155-3184	200
Muskogee County				
Denton et al	1	NWc SW 16-15-17 E	T.D. 1550	Dry
Noble County				
Mid Cox	3	NEc NW NW 22-23-2 W	T.D. 2717 OWD	Dry
Okmulgee County				
Sidwell	3	NWc SW 4-14-11 E	T.D. 3020	Dry
Hammon et al	3	SWc SE SW 26-15-12 E	2179-2184 OWD	2M
Kirkland	4	NW SE 17-15-13 E	1269-1400	10
Okfuskee County				
Robinson	1	NEc SW 35-11-9 E	3151-3160	3M
Champlin	3	SEc SE 15-11-11 E	3431-3438 OWD	1907
Osage County				
Peters	7	SEc NE NW NW 17-27-6 E	2943-3000	768
Geo Parker	4	NWc SW 28-26-6 E	2942-2990	151
Skelly	1	SEc SW 12-26-4 E	T.D. 3580	Dry
Pawnee County				
Magnolia	5	Sec NE 32-20-6 E	T.D. 3510	Dry
Abicht et al	1	NWc NE NE 34-20-9 E	T.D. 1426	Dry
Pottawatomie County				
Sikes-Kilgore	1	C SE SE 26-11-4 E	T.D. 5577	Dry
Phillips	5	NEc SW SE 9-9-5 E	4339-4345	750
Gypsy	2	NWc 16-9-5 E	4309-4310	85
Gypsy	2	NEc SE NE 17-9-5 E	4373-4388	22
Pontotoc County				
Louisiana	1	NEc NW NE 20-5-8 E	2442-2450	300
Seminole County				
Barnsdall	1	SWc SE SW 2-9-5 E	3493-3521	35
Barnsdall	1	SWc SE SW 10-9-5 E	4401-4403	333
Magnolia	4	NWc SW SW 11-9-5 E	4311-4316 OWD	4562
Sinclair	1	SEc NE NE 22-9-6 E	4168-4196	865
Empire	1	MWc SE 25-9-6 E	4208-4228	765
Empire	2	SWc SE 25-9-6 E	4263-4281	650
Texas	1	SEc NW 7-9-8 E	3302-3316	40
Atlantic	3	SEc 10-8-6 E	4025-4061	1771
Carter	2	NWc 14-8-6 E	4133-4185	2305
Pure	13	SWc NW SE 14-8-6 E	4263-4293	2138
Texas	1	SEc NE 14-8-6 E	4221-4246	3615
Amerada	2	NWc NE SW 15-8-6 E	4192-4230	875
I. T. I. O.	2	SEc SW NE 15-8-6 E	4335-4362	820
I. T. I. O.	10	SWc NW NE 15-8-6 E	4244-4293	4121
I. T. I. O.	9	NWc 15-8-6 E	4458-4468	4303
I. T. I. O.	10	Sec NE NW 15-8-6 E	4005-4052	861
Atlantic	1	NEc NW 23-8-6 E	4239-4257	4008
Prairie	1	SEc NE NE 22-10-6 E	4245-4250	200
Magnolia	4	NEc SW SW 25-9-6 E	4267-4273	600
Barnsdall	1	SWc SE SW 10-9-7 E	T.D. 3658	Dry
Stephens County				
Murphy	3	NWc SW SW SE 2-1-5 W	T.D. 1262	Dry
Carter	1	NEc NW SE 9-1-5 W	T.D. 3195	Dry
Gilmer et al	3	NWc SE SE 24-1-4 W	2375-3006	1280
Beard-Cobb	1	SWc NW SE 11-2-8 W	1508-1522	160
Tulsa County				
Savoy	1	SWc NE 8-16-14 E	1950-1956	30
S. W. Anthoney	2	SWc SE NW 34-17-12 E	T.E. 1426	Dry
Savoy	1	NWc SW SE 7-16-14 E	T.D. 1952	Dry
Wagoner County				
O. A. Sewell	1	NWc SE SE 28-17-16 E	1024-1032	4

KANSAS

Company	Well No.	Location		Init. Prod.
Butler County				
Allison et al	2	NEc NW NE 9-27-6 E	3144-3151	250
Chase County				
Phillips	2	C SW SW 29-18-7 E	1142-1148	1½M
Cowley County				
Texas	1	SWc NE SE 21-31-4 E	2417-2426	50
Foster et al	1	NWc SE SW 22-32-4 E	2315-2348	174
Elk County				
Superior	2	SWc NW 7-31-11 E	T.D. 2025	Dry
Pure	18	SEc NW NW SE 14-31-10 E	1640-1645	40
Greenwood County				
Prairie	8	C SW SE 5-23-11 E	T.D. 1963	15
Tidal	31	NE SE NE 34-25-8 E	T.D. 2510	Dry
Hayes et al	1	SEc 17-28-9 E	T.D. 2937	Dry
McPherson County				
Johnson et al	1	SEc NW 12-19-3 W	T.D. 3520	Dry
Rice County				
Sand Creek	3	NEc SE NW 2-21-6 W	T.D. 3440	Dry
Sumner County				
Champlin	1	SWC SE 4-30-1 W	T.D. 3935	Dry
Roxana	2	CS1½ NW SW 25-31-2 E	1854-1900	437
Sedgwick County				
Boyle et al	1	NEc SE 6-25-1 E	T.D. 3857	Dry

(*Continued from page* 41)

if conditions still warrant a shutting in, or pinching in, of these wells, I believe the producers will agree to continue the policy of holding back new production.

"We have tried to hold back the drilling on the edges and keep the pools from extending too rapidly, but the fear of the pressure going off so rapidly that they would not be able to recover their share of the oil makes it nearly impossible to accomplish anything worth while in the intensive areas."

MR. COLLINS' statement recognizes that "gas and air lift is a generally accepted method of producing oil and would be hard to control, due to the wells that are located structurally high flowing longer than the wells down on the dips." He says the producers also feel they can bring the oil to the surface much cheaper by this method and that the ultimate recovery is much greater.

The suggestion is made by Mr. Collins that producers insist on all future leases reading for 10 years, instead of for five years, saying:

"The Gypsy Oil Co., the I. T. I. O., and many other companies have spent thousands of dollars getting renewals rather than to drill at this time. There are times, however, when the lessors will not give even a 90-day extension of time at any price and other lessors ask such a prohibitive amount that the producer is forced to drill until he has a paying well. This was the case in the 1-7-6 area, where the I. T. I. O. had arranged to pay $30,000 for renewals and the Prairie was to take care of its royalty owners provided that the Mid-Continent Petroleum Corp. could get a 90-days extension. Some of the royalty owners would not give the Mid-Continent the necessary time, so that the companies in the immediate vicinity and the ones with short term leases were forced to drill."

Mr. Collins concludes his statement by saying that "if the producers were not in accord with this (the curtailment) movement there would be 200 more wells drilling with the prospect of the pipelines not being able to take care of the additional oil which would be brought to the surface."

Four State Secretaries Meet

WICHITA, June 16.—Secretaries of the Kansas, Missouri, Iowa and Nebraska jobbers associations were to meet at the President hotel, Kansas City, June 20, to make plans for a four state jobbers meeting to be held in Kansas City during September. The Kansas City Oil Men's Club will meet with the state officials in the evening to outline a plan for entertaining the jobbers during their visit to Kansas City.

(DUNN TOOLAGRAM)

DUNN SUPER SAFETY ELEVATORS

Double Door "Flyer" Type

DUNN ROTARY FLYER
OIL WELL DUNN TOOLS
In partly open position. Note how center member rises and falls with the opening and closing of doors.
DUNN "Rotary Flyer" Elevators and Tongs were used in drilling to completion the deepest well ever drilled. Hundreds of them are in use throughout the world, handling the longest strings of drill pipe, casing and tubing.
In fully open position. The doors are semi-locked when in this position.
Front view closed and locked on pipe. Elevator cannot be opened until relieved of load —
Rear view, in closed position and locked. When not under load, elevator is easily opened with cat line —
DUNN SUPER-SAFETY

There Is Absolutely No Strain On The Latch

This is a top view of the Dunn Super-Safety "Flyer" Type (Double-Door) Elevator. Note the position of the two hinge pins in direct parallel, both horizontally and vertically, with the links and the load. Absolutely no spreading strains are possible. When under load the weight of the string forces the two doors against the pipe *relieving the latch of all strain.*

The doors are geared together and the center section, or body, gears the elevator to the pipe.

It is impossible for this elevator to open, or be opened, under any circumstances while the elevator is carrying the load, but when relieved of the load it can be opened and closed easily and quickly with a single movement of one hand, as the latch and handle are combined.

Note the position of the latch handle, which makes it easy for the operator to *open the elevator with a catline, if desired, when not under load.*

Compare this exclusive Dunn creation with the antiquated so-called "split-type" elevator, designed with but one hinge pin, which, together with the latch is under a terrific leverage strain in addition to the normal load.

We solicit an opportunity to demonstrate to any responsible user, that the Dunn Super-Safety "Flyer Type" (Double-Door) Elevators are the fastest, safest and strongest made. Write us for our liberal trial offer.

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Completions in N. E., Central, West, Panhandle and North Texas, Week Ended June 18, 1927

Company	Well Farm	Location Survey	Depth	Init. Prod.
Brown County				
Selby	2-Ellis	SA&MG	1317-1327	392
Hughes	14-Shore	Ryan	1259-1279	600
Hughes	21-Shore	Ryan	1293-1313	600
McKenna et al	15-Shore	Betts	1304-1327	300
McKenna et al	16-Shore	Betts	1306-1327	200
Sinclair	4-Shore	Ryan	1304-1317	558
Sinclair	7-Shore	Ryan	1229-1309	600
Sinclair	55-Shore	Ryan	1248-1263	500
Wentz	7-Shore	Betts	1329-1335	75
Wentz	18-Shore	Betts	1313-1331	165
Texas	2-Byler	T&NO	1281-1302	135
Ward et al	1-Byler	T&NO	1306-1322	50
Ryan	3-Brooks	Hermandez	851-855	1½M
Anderson et al	1-Bowden	Peters	T.D. 1402	Dry
Bell et al	1-Garrett	H&TB	T.D. 1710	Dry
Barbara	6-Willis	Vance	T.D. 1390	Dry
Humphreys	1-Bell	H&TB	T.D. 2275	Dry
Henshaw	1-Gladwell	Kerr	T.D. 881	Dry
Callahan County				
Richardson	1-Cutbirth	Briggs	T.D. 2807	Dry
Coleman County				
Porter	1-Rich	Comal	T.D. 470	Dry
Brown et al	2-Powell	Little	T.D. 1508	Dry
Love et al	1-Taylor	Goodwin	T.D. 238	Dry
Eastland County				
Morrison et al	1-Harrell	ET	T.D. 1505	Dry
Assoc	1-Luse	BBB&C	T.D. 3325	Dry
Fannin County				
Honey Grove	1-Broodfoot	Williams	T.D. 2296	Dry
Fisher County				
Marland	1-Hodges	H&TC	T.D. 2991	Dry
Franklin County				
Trout et al	1-Gandy	Truitt	T.D. 3330	Dry
Jack County				
Seaboard	5-Cullers	Chairs	2024-2030	65
Navarro County				
Reiter et al	1-Stubbs	Obern	T.D. 3213	Dry
Shackelford County				
Tannehill	1-Mathews	ET	T.D. 1185	Dry
Roeser et al	1-Reynolds	TP	T.D. 1597	Dry
Gwinnup et al	1-Green	T&P	T.D. 1745	Dry
Taylor County				
Mid West	1-Toombs	Alexander	T.D. 2757	Dry
Throckmorton County				
Magnolia	1-Graham	TE&L	3195-3211	44
Falls	2-Graham	TE&L	1796-1896	211
Gulf	4-Graham	TE&L	1798-1808	215
Young County				
Stovall	6-Stovall	Tobin	3825-3825	65
Shonquist	1-Burnett	Tobin	2916-3902	88
T. P. C. & O.	2-Donnell	TEL	3352-3367	1000
Dyer et al	1-Castello	Poitevant	T.D. 2610	Dry
NORTH TEXAS				
Archer County				
Atlantic	3-Wilson	DLC	1529-1544	200
Gwynn et al	1-Ward	Rainey	930-937	700
Ray et al	1-Wilson	SPR	T.D. 1585	Dry
Burns et al	1-Wilson	ATNC	T.D. 1601	Dry
Burns et al	1-Taber	DCSL	T.D. 1508	Dry
Pandem	1-Thomas	Thomas	T.D. 1138	Dry
Bridwell et al	1-Cowan	JCSL	T.D. 1506	Dry
Roxana et al	1-Farmer	BCSL	T.D. 1604	Dry
Clay County				
Stump et al	2-Doddy	HTR	T.D. 1317	Dry
Rounsaville	1-Berry	TEL	T.D. 863	Dry
Cook County				
Pure	1-Embry	Moss	1272-1274	500
Strube et al	3-Koelzer	Scott	1614-1638	200
Sun	1-Hacker	Scott	1721-1755	105
Oil Oper. Trust	5-Kleiss	Littleton	1559-1561	400
Denton County				
Jones et al	1-Wade	Carpenter	T.D. 1913	Dry
Hardeman County				
Murchison	1-Mansfield	W&NW	T.D. 2501	Dry
Montague County				
Olean	1-Smith	Kaufman	T.D. 2310	Dry
Dale	1-Adams	Hennis	T.D. 2410	Dry
Wichita County				
Consolidated	2-Ancel	H&TC	1722-1725	130
Texas	3-Waggoner	George	1266-1284	12
O'Neil et al	2-Allingham	H&TC	T.D. 2350	Dry
Beaver	1-Chilton	Campbell	T.D. 183	Dry
Archer et al	1-Barton	Spiller	T.D. 1825	Dry
Wolf et al	2-Nitschke	DCSL	T.D. 1850	Dry
Wilbarger County				
Atlantic	1-Fluhman	McKinney	1465-1472	52
Phillips	1-Waggoner	HTC	2295-2310	20
Phillips	16-Waggoner	H&TC	2591-2593	100
Phillips	7-Waggoner	H&TC	2556-2559	92
Milham	10-Waggoner	H&TC	2102-2110	147
Young County				
Bowler	1-Stewart	Dawson	760-775	80
Maddox et al	1-Perkins	TEL	790-793	8
Riggs et al	3-Brown	Tynes	535-563	6
Riggs et al	4-Brown	Tynes	537-559	7
Baldwin et al	1-Stewart	YCSL	T.D. 654	Dry
Smith	1-Thomas	TEL	T.D. 902	Dry
PANHANDLE				
Carson County				
Gulf	21-Burnett	I&GN	T.D. 3035	Dry
Marston	2-Bryan	I&GN	3135-3196	125
Roxana	3-Jordan-Brown	I&GN	3083-3130	524
Gray County				
Wilcox	27-Reynolds	I&GN	2930-2991	125
Hutchinson County				
Dominion	1-Jasper	TCRR	3033-3137	10
Phillips	7-George	H&TC	2870-2885	125
Phillips	1-Johnson	H&TC	2708-2850	10
Phillips	7-Whittenburg	H&TC	2765-2770	60
Gulf	16-Johnson	H&TC	2935-2968	60
Phillips	9-Tinnie	H&TC	2349-2376	150
Midwest	2-Wilson	H&TC	2852-2874	75
Phillips	8-Whittenburg	Whitley	2879-2917	10
Phillips	9-Whittenburg	H&TC	2865-2927	50
Phillips	11-Whittenburg	H&TC	2861-2890	200
Phillips	13-Whittenburg	H&TC	2856-2895	150
Phillips	18-Whittenburg	H&TC	2880-2933	10
Phillips	19-Whittenburg	H&TC	2917-2947	250
Triangle	6-Smith	M&C	2708-2729	100
Derby	2-Johnson	A&B	2840-2948	800
Derby	4-Johnson	A&B	2884-2942	192
Summit	4-Whittenburg	M&C	2885-2990	10
Sunburst	3-Smith	M&C	2945-3040	480
Relief	2-Smith	M&C	2700-2820	10
Sullivan	1-Cockrell	M&C	2851-2972	40
Riley et al	1-Cockrell	M&C	2905-2990	20
Palmer County				
Humble	1-Capitol	CSS	T.D. 3503	Dry
WEST TEXAS				
Crane County				
Church et al	2-Univ.	Univ.	2834-2952	420
Humble	9-Univ.	Univ.	2880-2970	52
Gulf	11-McElroy	CCSD	2783-2910	95
Gulf	12-McElroy	CCSD	2809-2840	3460
Pecos County				
Mid Kansas et al	1-Smith	GC&SF	1170-1271	3577
Reagan County				
Big Lake	111-Univ.	Univ.	2880-2893	100
Texon	65-Univ.	Univ.	2968-2987	375
Upton County				
Marland	11-Estep		2321-2403	100
Dixie	25-Burleson	Nidiver	1950-2035	290
Texas	1-Perry	GC&SF	1965-2041	352
Davis	1-Bull	T&P	T.D. 3523	Dry
Winkler County				
Independent	1-Hendricks	PSL	2877-3049	40

South Penn is Retailing Under Own Name

PARKERSBURG, W. Va., June 18.—The South Penn Oil Co., a veteran producing organization of the eastern fields, has gone into the marketing business under its own name. It has two jobbing companies in West Virginia.

One was the Belpre Service Station at Parkersburg and the other was the Oil Service Co., Charleston, W. Va., owned by L. A. Gastineau. It is reported that the South Penn Oil City, Pa., it has some filling stations in Pennsylvania.

The new movement of the South Penn is credited to the fact that it has large natural gasoline production in West Virginia and that like most other natural gasoline manufacturers in the last six months, it has had difficulty in finding buyers. It is blending its natural gasoline with naphtha which it buys from refineries, and is selling the product as Spoco at a service station price of 3 cents under that of the Standard of New Jersey.

Through the controlled Pennzoil Co., paid some $90,000 for Oil Service Co.

Carolina Jobbers Postpone Meeting

GREENSBORO, N. C., June 20.—Owing to a conflict in dates with the meeting of the Virginia Independent Oil Men's Association, the meeting of the North Carolina Independent Oil Jobbers Association has been postponed from June 13 to June 28. It will be held at the O. Henry Hotel here.

The meeting was postponed in order that the code of ethics which was discussed at the Virginia jobbers meeting, could be submitted at the North Carolina convention, according to L. H. Martin, of L. H. Martin, Inc. here.

California 1926 Production 219,505,748 Bbls.

Staff Special

LOS ANGELES, June 18.—The cost of conducting the affairs of the Department of Petroleum and Gas of the California State Mining Bureau during the coming fiscal year has been estimated at $163,000. To raise this sum oil and gas producers and oil land owners are subject to a tax.

In prorating this tax, one-tenth is assessed against the owners of proved lands while the remaining nine-tenths is levied against the oil and gas producers. For the purpose of the assessment, 10,000 cubic feet of gas is considered equal to one barrel of oil. The rate of assessment is .00063974 cent against each barrel of oil which will raise $164,000.

According to sworn statements to State Mining Bureau, net production of oil in 1926 was 212,505,748 barrels and 98,060,880,000 cubic feet of gas was produced and sold.

The total proved oil land is given at 121,435 acres, but of this 22,493 acres are owned by federal state and city governments and is not assessable. This leaves 98,942 acres subject to assessment and the rate is .1647 cent an acre.

As of March 1, it was found that 11,281 wells were on production. Kern county was credited with 5309 wells, while Los Angeles had 2976 wells, Orange county had 1165 wells and the remaining wells are scattered in Fresno, Ventura, Santa Barbara, San Luis Obispo, Santa Clara and three other counties.

The proven acreage was given as follows, by counties:

County	Total proven	Total assessable
Fresno	14,665	14,477
Kern	77,502	56,730
Los Angeles	10,041	9,163
Orange	6,536	5,993
Ventura	4,815	4,703
Santa Barbara	7,394	7,394
San Luis Obispo	402	402
Santa Clara	80	80
Totals	121,435	98,942

Gulf Coastal Water Shipments, May Compared with April

(All figures in barrels of 42 gallons)

Company—Port	Coastwise Refined April	Coastwise Refined May	Export Refined April	Export Refined May
Standard of Louisiana				
Baton Rouge	1,327,831.00	542,174.00	605,783.00	133,411.00
The Texas Company				
Port Arthur	1,043,478.00	1,264,774.00	308,252.00	452,727.00
Gulf Refining Co.				
Port Arthur	2,346,084.04	2,456,637.19	.....	68,202.54
Magnolia Petroleum Co.,				
Beaumont	1,250,555.54	1,247,073.19(a)	.....	.....
Sinclair Refining Co.				
Houston	373,485.81	389,025.15	94,711,69	140,760.35
Humble Oil & Refg. Co.				
Baytown	1,387,045.97	1,515,690.81	665,397.23	1,131,357.08
Marland Oil Company				
Texas City	.....	.....(b)	.....	.....
Atlantic Oil Producing Co.				
Atreco	.....	.....	.....	.....
Galena Signal Oil Co.				
Houston	170,000.00	108,000.00	.....	154,000.00
Deepwater Oil Refineries				
Houston	50,000.00	.....	.....	50,000.00
Keen & Woolf Oil Co.				
Houston	.....	.....	.....	.....
Pure Oil Company				
Smiths Bluff	.....	163,423.08	.....	.....
Totals	7,948,480.36	7,686,797.42	1,674,143.92	2,130,457.97
	Coastwise Crude		**Export Crude**	
Standard of Louisiana				
Baton Rouge	345,222.00	78,521.00	.....	.....
The Texas Company				
Port Arthur	.....	.....	.....	24,351.00
Gulf Refining Co.				
Port Arthur	117,513.40	78,516.41	.....	.....
Magnolia Petroleum Co.				
Beaumont	704,608.80	1,002,953.17(a)	.....	.....
Sinclair Refining Co.				
Houston	440,812.44	292,160.38	.....	.....
Humble Oil & Refg. Co.				
Texas City	1,695,577.00	2,075,840.00	.....	.....
Baytown	808,052.00	855,824.00	.....	.....
Ingleside	105,219.00	202,919.00	.....	.....
Neches Terminal	.....	90,373.00	.....	.....
Atlantic Oil Producing Co.				
Atreco	412,715.27	232,083.72	.....	.....
Pasadena	308,290.92	159,526.81(c)	.....	.....
Smiths Bluff	44,968.70	124,324.11	.....	.....
Beaumont	.....	238,632.33	.....	.....
Swiftsure Petroleum Co.				
Texas City	262,869.00	235,791.00	.....	.....
Pure Oil Company				
Smiths Bluff	1,141,177.61(d)	698,212.26	.....	.....
Sun Oil Company				
Sabine Pass	547,572.00	715,782.00	.....	.....
Totals	6,934,598.14	7,081,459.19	.....	24,351.00

(a)—Magnolia Petroleum Company makes no distinction in reports between coastwise and export shipments.
(b)—No report.
(c)—Handled through terminal of Crown Central Petroleum Corp.
(d)—Figure includes refined and crude oils.

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New Deep Sand is Discovered in Seal Beach Field

By William E. Green
N. P. N. STAFF WRITER

LOS ANGELES, June 18

WITH approximately 20,000 barrels of flush production from new wells at Seal Beach during the past week, the daily average of the field held steady at 73,000 barrels, which is expected to be the peak, unless a deeper prolific sand is uncovered.

The new wells being completed and reconditioned in the Alamitos Heights end of Seal Beach average close to 2000 barrels the first hour or so, but within three days production is down to approximately half of the flush, and the decline continues a little less rapidly. Unless there is at least 20,000 barrels of flush production the coming week, a decline can be expected.

Although Seal Beach held the spot light the past week, due largely to high flush of new wells and their heavy decline and to the finding of a new and deeper sand on the Wassem tract by the General Petroleum Corp. in its Wassem 7, which found about 20 feet of broken oil sand below 5260 feet, declines in production at Long Beach, Huntington Beach, and in the Elk Hills forced a total decline in crude production in the state.

General Petroleum's Wassem well is south and west of the prolific Alamitos Heights area. In the prolific area, wells are drilled to 4800 to 4900 feet and produce from the Selover sand, ranging in thickness from 70 to 300 feet. Immediately below this there is a gray sand said to contain water. In fact, one well penetrated this sand, cemented the water off, and is producing from an oil sand just below the water. But this lower sand is thought to be the Selover, with a thin water sand in between.

General Petroleum late this week was running in a string of pipe to be cemented at about 5260 feet, preparatory to testing the oil sand already penetrated. It is not known just how much oil sand there is, as the drill stopped in the oil bearing formation.

If it develops that this new Wassem sand is worth while, likely wells on top of the structure will drill deeper to see if it underlies the present prolific area—and many geologists think it does. If this sand should prove prolific, Seal Beach can be expected to produce considerable oil for some time, but the deeper sand cannot be developed, even if it proves extra good, for several weeks, as the present wells with pipe already cemented at around 4500 to 4600 feet, could only drill deeper with 4½ inch holes.

Long Beach and Huntington Beach production was off the past week, and taken together with declines in the northern fields during the past two weeks, brings about a decline in the state production. Since Seal Beach cannot possibly be expected to show a sufficient increase to offset declines elsewhere, the crude situation in California is considered fairly bright.

Riverbed Well Extends Yates Ranch Field

TULSA, June 18.—Allsman & Bell, operating as the Ozona Development Co., and drilling in the Pecos riverbed east of the Yates ranch (west Texas) field, have an oil well in the making in pay at 980-1026 feet. Oil stands in the hole under ordinary conditions and the well made one flow of 30 barrels when the bailer was pulled June 17. Reports circulated in the Mid-Continent that the well had come in making 50 barrels an hour were incorrect.

The riverbed well proves an intervening area between it and the Mid-Kansas & Transcontinental wells on the Yates ranch, 6000 feet to the west. Most of this ground is in the Mid-Kansas & Transcontinental block, but a half section immediately west of the river is owned by Marland Oil Co. of Texas, which must drill an offset. Another well to the north of the Marland location and northwest of the Allsman & Bell producer will have to be drilled by the Mid-Kansas & Transcontinental partnership.

Because of a public school land interest in the mineral rights the completion of a producing well within 1000 feet of such acreage forces drilling, the Texas statutes setting up such a requirement.

The election of Ira E. Humphreys to the presidency of the Humphreys Corp., brings forward a son of the veteran wildcatter, Col. Albert E. Humphreys, who was recently killed by the accidental discharge of a shotgun at his Denver home. Vice-presidents of the Humphreys Corp., include F. Julius Fohs, New York, Albert E. Humphreys, Jr., Denver, another son; Frank Cox, and J. A. Elkins, Houston.

Restriction of production in a single oil field for a short interval is a laudable step indicative of the constructive spirit of the industry It is better than no restriction It is a good beginning

But nothing short of complete nation-wide restriction of production will really solve the present difficulty and insure a lasting and healthy condition Such restriction will be sound in principle

Keep up the wild-catting
Locate every available pool of oil
Explore new depths
Improve methods of production

But, bring out of the ground only as much as is required to meet economic needs based on cracking every available drop of crude in each barrel, and that means based on what The Cracking Process can do and is doing

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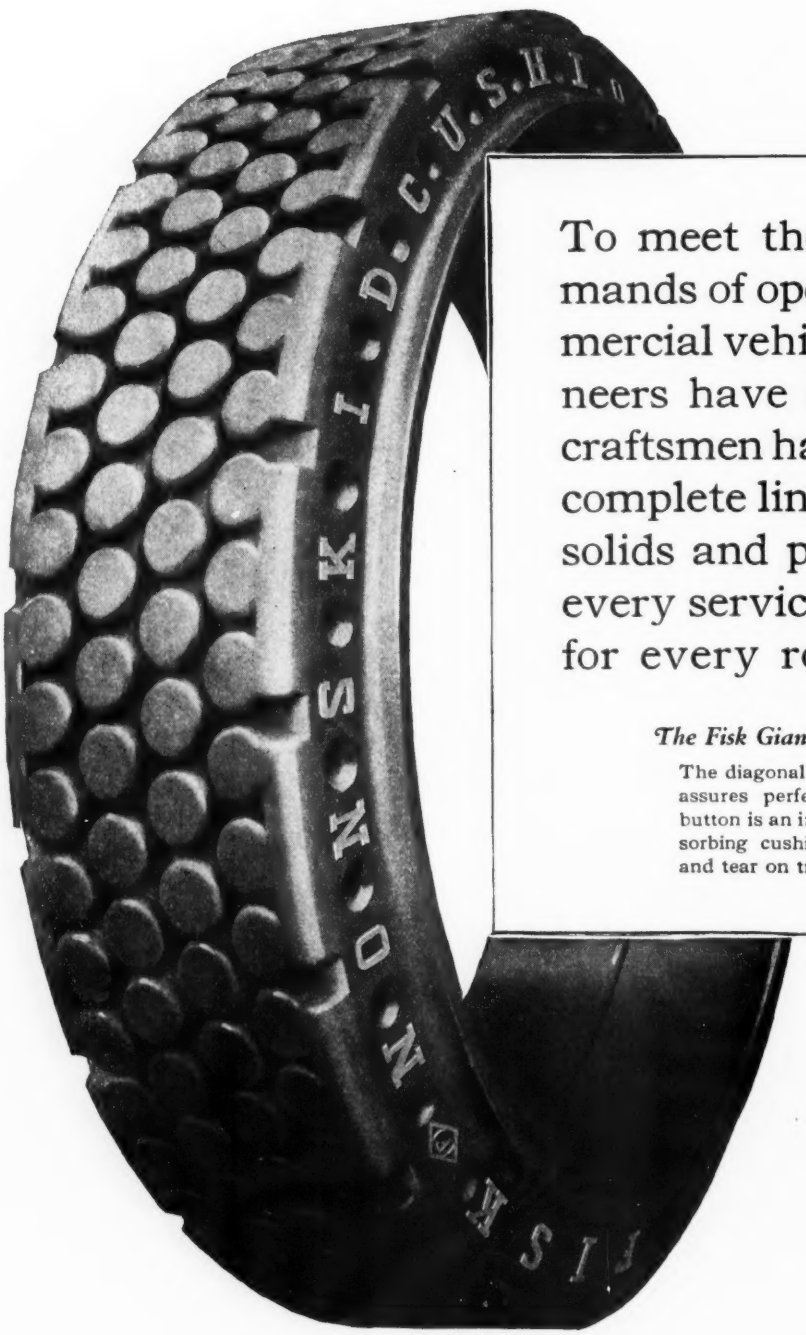

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"Waste not your Hour, nor in the vain pursuit
Of This and That endeavour and dispute;
Better be jocund with the fruitful Grape
Than sadden after none, or bitter, Fruit."

YOUR time is valuable. Your needs are evident. Waste not your hour in vain pursuit of another source of supply.

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OMAR is an independent refiner with no stations, selling to the independent jobber—a dependable service.

NOMAR-NOC		42-44 W.W.D.T. Kerosene
64-66	375	41-43 W.W.D.T. Kerosene
60-62	400	Gas Oil—Fuel Oil
58-60	U.S.M.	

Omar Refining Company

Roberts Bldg.
TULSA, OKLA.

Jones and Teagle Assert Oil Industry Expansion Exceeds Economic Needs

CLEVELAND, June 17

ECONOMIC requirements have been exceeded in the oil industry in the last 10 years but the cheapness of petroleum has helped other industries and stimulated commerce generally, George H. Jones, chairman of the board, and Walter C. Teagle, president, Standard Oil Co. of New Jersey, told stockholders in the company's annual report. The New Jersey company, they said, had been endeavoring to alleviate overproduction of both crude oil and gasoline by curtailing drilling activities and closing cracking stills.

Forewarning that the 1927 earnings probably will reflect the low prices for both crude oil and products, was also written into the report. The full seriousness of the overproduction of crude was not felt until after the turn of the year and earnings last year were the largest since 400 per cent stock dividend in 1922, they said.

The net on the common last year was $5.17 a share on the $517,397,550 common stock, par value $25 a share. In 1925 net earnings on common stock was $4.72 a share after all charges and dividends on the preferred stock which was retired March 15, this year.

Net earnings of the New Jersey company and subsidiaries after all charges and reserves, amounted to $117,652,201, compared with $111,231,355 in 1926, a gain of $6,420,846 or 5.77 per cent last year.

Messrs. Jones and Teagle said that new capital put into the oil industry in the last 10 years had exceeded economic requirements and that petroleum areas in the United States and abroad had been developed so rapidly that an unprofitable surplus of crude oil and products had been created. They continued:

"The net result of this has been to make petroleum products the cheapest and most accessible of modern commodities, to promote the expansion of other industries, notably the manufacture of motor cars, and to stimulate commerce generally. Expansion has also been accompanied by higher overhead charges, increased costs of operation and a consequent diminished return upon the industry's capital investment.

"Either a curtailment of drilling activities, a decrease in production from existing fields and a halt in the construction of marketing and refining facilities, or a more rapid increase in consumption will be necessary before the petroleum industry can enjoy average earnings comparable to those of many other lines of trade."

After comparing production and prices in 1926 with those of 1925, they said:

"THE current oversupply aggravated the problem of carrying unduly large reserves created during previous flush periods of production, and thereby increased the financial burden of storage. As a matter of fact, smaller reserves are sufficient now as a safeguard for periods of underproduction than was the case when much of this stored oil was accumulated by reason of the increased yield of gasoline per barrel obtainable through modern refining methods.

"It is now recognized that current price conditions and drilling obligations have kept surplus crude stocks from functioning as a real reserve. Had stocks been more liberally drawn upon early last Summer and the stimulus of high prices been lacking, it is doubtful if the industry would have prosecuted the intensive drilling campaign which is today resulting in a flood of oil. The oil would have remained in the ground to be withdrawn when needed."

Concerning operations of the New Jersey company they said:

"In 1926 the company's gross crude oil production amounted to 61,839,440 barrels (daily average 166,683 barrels). Of this, 34,343,890 barrels were produced in the United States. Its gross foreign production totaled 27,495,541 barrels, which were obtained through affiliated companies operating in Peru, Colombia, Mexico, Rumania, Poland, Canada, Dutch East Indies, Venezuela, Bolivia and Argentine.

"THE total production by the Standard Oil Co. of New Jersey and affiliated companies decreased by about 10,000,000 barrels as compared to 1925. This loss was chiefly accounted for by decreases in Texas and Mexico. There was a large increase in the production of the company's subsidiary in Colombia. The 360-mile pipe-line under construction there was completed, and since the middle of last year has been delivering to tank

Standard Oil Co. of New Jersey Consolidated Income Accounts

	1926	1925
Total gross earnings from operations	$1,283,554,860	$1,122,682,610
Net income from miscellaneous scources	25,409,173	22,837,893
	$1,308,964,033	$1,145,520,504
Less: Costs, operating charges and general expenses	1,119,236,425	972,693,627
	$ 189,727,608	$ 172,826,877
Less: Reserve for income taxes on earnings	16,107,694	13,188,618
	$ 173,619,913	$ 159,638,259
Less: Depreciation and depletion	55,967,712	48,406,904
Consolidated net Earnings	$ 117,652,201	$ 111,231,355

Consolidated balance sheets of Standard of New Jersey of Dec. 31

Assets

	1926	1925
Real estate, plant and equipment	$ 967,583,728	$ 863,682,073
Less: Depreciation and depletion	416,793,762	349,369,763
	$ 550,789,966	$ 514,312,310
Investments:		
Stocks of corporations not consolidated herein	116,149,274	108,361,044
Miscellaneous securities	6,896,126	.....
Miscellaneous property	10,497,661	5,680,232
	$ 133,543,061	$ 114,041,276
Government and other marketable securities	*198,823,806	50,753,423
Inventories of merchandise	303,068,933	294,231,374
Accounts receivable	344,095,979	384,055,959
Cash on hand and in banks	11,623,380	11,776,029
Total assets	$1,541,945,125	$1,369,170,371

*Includes proceeds of sale of $120,000,000 of debentures.

Liabilities

	1926	1925
Capital Stock: Preferred	$ †199,972,900	$ 199,972,900
Common	517,397,550	514,706,025
	$ 717,370,450	$ 714,678,925
Accounts payable	214,350,289	$ 275,062,077
Reserved for income taxes	17,867,296	16,022,712
Insurance reserves	18,566,292	14,181,775
Funded debt	120,000,000	.....
Previous surplus	349,224,881	278,260,965
Less: Income tax payments and other adjustments applicable to prior years	2,857,506	5,873,345
	$ 846,367,375	$ 272,387,620
Add: Net earnings for the year	117,625,201	111,231,355
Less: dividends paid on common stock and preferred stock	37,228,779	34,394,094
Surplus: Dec. 31	$ 80,423,422	$ 76,837,261
	426,790,797	349,224,882
Total liabilities	$1,541,945,125	$1,369,170,371

†Retired March 15, 1927.

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steamers at Cartagena approximately 30,000 barrels a day. The capacity of this line is now being increased to 50,000 barrels.

"In the foreign field the company continued its geological exploration and development work inaugurated in 1920. During 1926 discoveries were made in heretofore undeveloped territory where the company has extensive acreage, and this holds out fair promise of future production.

"The extraction of gasoline at recovery plants from gas produced from oil and gas wells was materially increased during the past year. The total casinghead and natural gas gasoline obtained was 3,045,000 barrels, which compares with 2,200,000 barrels in 1925.

"Through four affiliated pipe line companies operating a total of 2,422 miles of trunk lines, the company had delivered at terminals last year nearly 97,000,000 barrels of oil, or 10,000,000 in excess of the figures of crude transported and delivered in the preceding year.

"An average of 74 vessels, of 854,522 dead-weight tons were operated in 1926. Of these ships, thirty-four were under the American flag, and 40, owned by European subsidiaries, were operated under foreign flags. Including operations of foreign subsidiaries and chartered vessels, 128,000,000 barrels of oil were moved. The owned and long-term charter fleet traveled 2,681,074 miles. The higher freight rates which prevailed during the latter half of 1926 were due to the general expansion of the oil industry and a consequent increased demand for tanker transportation.

"The average daily amount of crude run at the Atlantic Seaboard and Gulf Coast refineries was 309,167 barrels, as against 317,764 barrels in 1925; at the refineries operated in Canada, South America, Mexico and Europe, 76,256 barrels were run, as against an average of 63,503 barrels for the previous year. The total runs for all refineries for the year were 140,679,395 barrels, an increase of less than 2,000,000 barrels.

"While the consumption of crude oil at the domestic plants was less than that of 1925, there was produced from the smaller quantity an increased yield of gasoline of approximately 3,000,000 barrels.

"Competitive conditions were intensified last year in both domestic and foreign markets. The company's tank wagon and service station sales showed a gain over the preceding year. A complete line of asphalts was manufactured at Bayonne, Baltimore, Baton Rouge and Charleston plants with the grades standardized so as to offer the same uniform product from all points of origin.

"The company added substantially to its investment in natural gas properties. It purchased through a subsidiary all of the properties of the American Natural Gas Co. in western Pennsylvania, thereby effecting economies in operation, as the properties acquired were in large part contiguous to others of the old subsidiary companies and strengthened the gas reserves available for the markets in Pittsburgh and vicinity."

Total assets Dec. 31 were $1,541,945,125 compared with $1,369,170,371 Dec. 31, 1925, but the total assets were reduced March 15 this year by the retirement of the preferred stock.

An oil inventory of $303,068,933 was carried Dec. 31, a gain of $8,837,559 over the inventory Dec. 31, 1925. Cash carried amounted to $11,623,380 compared with $11,776,029 at the end of 1925, relatively small amounts for an organization with so large a business.

Current assets Dec. 31 were $857,612,097 and current liabilities $259,217,585, a ratio of 3.3 to 1. Net working capital was $598,394,512. Net working capital at the end of 1925 was $384,796,799. Current assets also were diminished March 15 by withdrawal of funds for retirement of the preferred stock.

In the future the company will use the uniform balance sheet and income statement adopted by the American Petroleum Institute, it announced. Adoption of the uniform accounting method was delayed because of lack of time to get revised statements from foreign subsidiaries, the executives said.

New Bulk Service Station in Canton

CANTON, O.—Red Raven Oil Co. has been incorporated by G. B. Ingram, Mrs. Lydia E. Ingram, Joseph Shetler, Mrs. C. Gorgas, and C. C. Curtis. The company has a bulk storage service station on a lot 117 by 243 feet at McKinley and 15th Sts. S. W. Meter dispensers are used. Red Raven company when opening the station late in May made an introductory price of 16 cents a gallon for gasoline. This was done, Mr. Ingram said, solely as an advertising stunt instead of giving away motor oil or courtesy cards good for discounts on gasoline at all times.

Embarks for European Jaunt

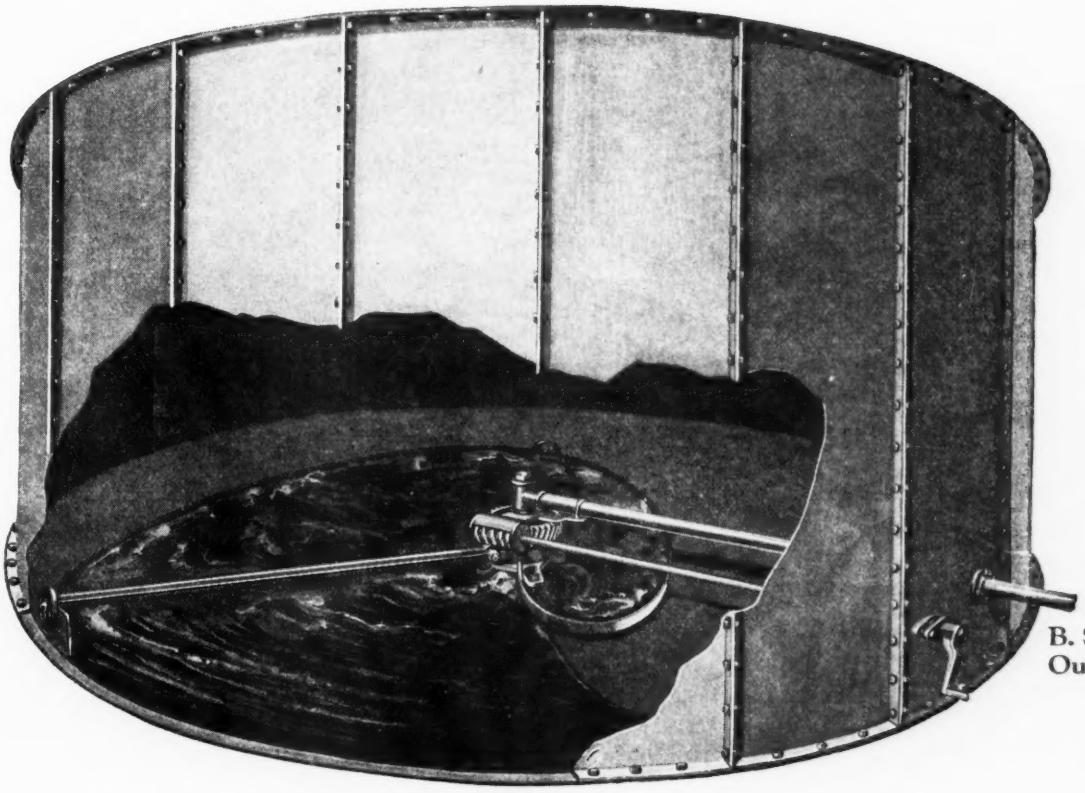
WORCESTER, Mass., June 18.—Albert R. Tattersall, secretary and treasurer, F. C. Bellis Co., oil jobber and marketer here, recently sailed with his family from New York on the S. S. President Roosevelt for Europe.

England, France, Belgium, Italy and Spain will be visited after Mr. Tattersall's mother joins the party at Plymouth, England. She has been visiting relatives in England for a year.

Announcing the—

OCECO Tank Cleaner

(Force Patents)



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The simplest and most economical method for removing B. S. from lease tanks.

ONE of the greatest boons ever offered producers: A simple, mechanical device that cleans a tank without draining in a few minutes (15 minutes or less according to actual records).

The use of the Oceco Tank Cleaner insures clean oil *all the time.* One producer who used to clean his tanks at least twice every 30 days by hand, now keeps them continually clean with this unique device, saving amazingly in time and labor.

The operator on the outside of the tank, turns the crank which revolves a spiral steel scraper as shown in the illustration. This revolving action draws all of the B. S. into the center whence it is pumped out through the pipe extending from the center. The good oil is never permitted to break through.

The whole apparatus is simplicity itself and can be readily installed in old or new tanks—nothing to get out of order. Priced so reasonably that it pays for itself in a very short time.

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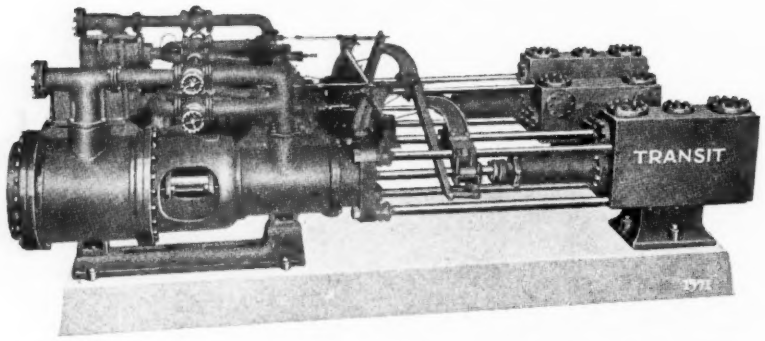
Elements of Uncertainty Are Removed



TRANSIT 16 and 24" x 6½ x 18" Horizontal Compound, Twin Single, Direct Acting, Piston Type, Hot Oil Pump. This particular pump was designed for 500 lbs. working pressure. Capacity 100 Gallons per Minute of 600° F. oil. Piston speed 60 feet per minute.

The fluid end of the above pump, however, is perfectly all right for 1000 lbs. working pressure, and will handle hot oil up to 1000° F.

IT TAKES heat and pressure to crack oil. The more uniform the speed and pressure of the hot oil through the tubes, the more certain will be the result (gasoline yield) in both quality and quantity.

TRANSIT hot oil pumps control the speed and pressure of the hot oil within very close limits. Speed and pressure thus controlled, in turn, exert a strong influence on maintaining constant temperature of the hot oil.

Thus by insuring unvarying speed; steady, even pressure, and constant temperature, TRANSIT Pumps exercise the closest control over these characteristics of the hot oil. This tends towards a certain definite gasoline yield, both in quantity and quality.

All fire hazards at the pump are removed. No one appreciates more than we that a leak means a flash, and a flash may mean an accident to an employee or a refinery fire — all in the twinkling of an eye. TRANSIT hot oil pumps have many features but the greatest of these is safety.

Heavy, forged steel fluid cylinders, tongue and groove flanged openings packed with sheet aluminum gaskets, insure against leaks, and furthermore, in order to prevent any possible leakage at the piston rods, we make a very deep stuffing box; so deep that the hot part of the rod never runs into the packing, much less into the open air. This stuffing box is water jacketed, and is equipped with a lantern gland to further insure that there will be no leakage of hot oil into the air. Lastly, the lantern gland itself is held in place by several rings of packing.

TRANSIT hot oil pumps are built in four types; Twin Single, Steam; Single, Steam duplex, steam and Vertical Triplex, Power. A word from you will bring complete descriptions.

NATIONAL TRANSIT
Pump & Machine Company
OIL CITY, PA.

New York Philadelphia Pittsburgh
Cleveland Houston Tulsa Denver

Guests at Housewarming Inspect Model Plant of Lincoln Oil Refining Co.

By Paul Truesdell

N. P. N. STAFF WRITER

Article 1

ROBINSON, ILL., June 15

WHEN a man moves into a fine new house, has the furniture arranged to suit him and gets everything running smoothly, he generally has a housewarming and invites in his friends to inspect the new home.

In the same way the Ohio Oil Co., and the Lincoln Oil Refining Co., its subsidiary, held open house yesterday at the new Lincoln plant here which marks the entry of the veteran oil producing company as an aggregate and successful factor in the refining and marketing fields.

Not that the Ohio Oil Co. just entered the refining and marketing branches of the industry yesterday. It took over the Lincoln Oil Refining Co. from the James B. Berry interests about three years ago, and the company has been making money as a refiner and marketer under the management of Harry L. Deming, manager.

The occasion of the party yesterday was the completion and getting into smooth operation of new equipment which has been more than a year in building and which has transformed the Lincoln works from a 1200-barrel plant of old design into a modern refinery with a crude capacity of 5000 barrels a day and a cracking capacity of 7200 barrels a day.

THE new construction includes four Holmes-Manley cracking units, a 5000-barrel pipe still, the equipment that goes with them, much new tankage and a fine new brick and steel and concrete building, whose grounds are beautifully landscaped with shrubs, that houses the Lincoln offices.

The crude distilling equipment and power plant will be described later in this article and the cracking plant and the successful selling plan under which the company is operating will be discussed in two articles to follow.

More than a score of old friends of the two companies were present at the housewarming. They were brother refiners, representatives of companies who furnished equipment used in the new plant, engineers that worked on the plant, railroad men and tank car men who furnish the cars and the motive power to haul the company's products to market.

It was a simple, friendly party from the time, Monday evening, when the guests began to arrive at the Woodworth hotel in Robinson. H. B. Carpenter, vice president of the Lincoln Oil Refining Co., greeted the guests as they arrived. Twenty-odd men sat around the hotel parlor smoking and talking, about the old days in the oil business, about the present days and the present outlook, about the new plant.

P. J. Shouvlin, veteran head of the Superior Gas Engine Co., Springfield, O., was present with his two sons, John and Dan, and he recalled vividly early oil field days and the characters that then held the stage. Mr. Carpenter, who is a clever amateur sleight of hand performer, entertained the party with several tricks.

TUESDAY morning the visitors were guests of the company at breakfast in the hotel private dining room and they were then taken to the plant in automobiles. They were divided into small groups for the tour around the refinery, each group under a guide competent to explain the equipment and processes of the plant. The visitors saw a spick and span plant, tanks gleaming with aluminum paint, brightly polished and painted machinery—everything running sweetly.

The morning was spent in plant inspection and the refiners of the party showed keen interest in the modern devices that have been installed. At noon the party was taken in automobiles to the Crawford Country Club for lunch. Following that the golfers did their stuff and at 6.30 the visitors were entertained at an excellent chicken dinner at Pifer's, a roadhouse outside the town. After the dinner, company cars were at the disposal of the guests to take them to Paris, Vincennes or Terre Haute to catch night trains for home.

Crude Distillation Plant

The products of the crude distillation side are gasoline, kerosene, viscous neutrals paraffin wax and flux oil. The equipment consists of a pipe still with fractionating towers and condensers, built by the M. W. Kellogg Co., nine shell stills, which were part of the old refinery, agitators for treating the lubricating oil, wax plant and filter house.

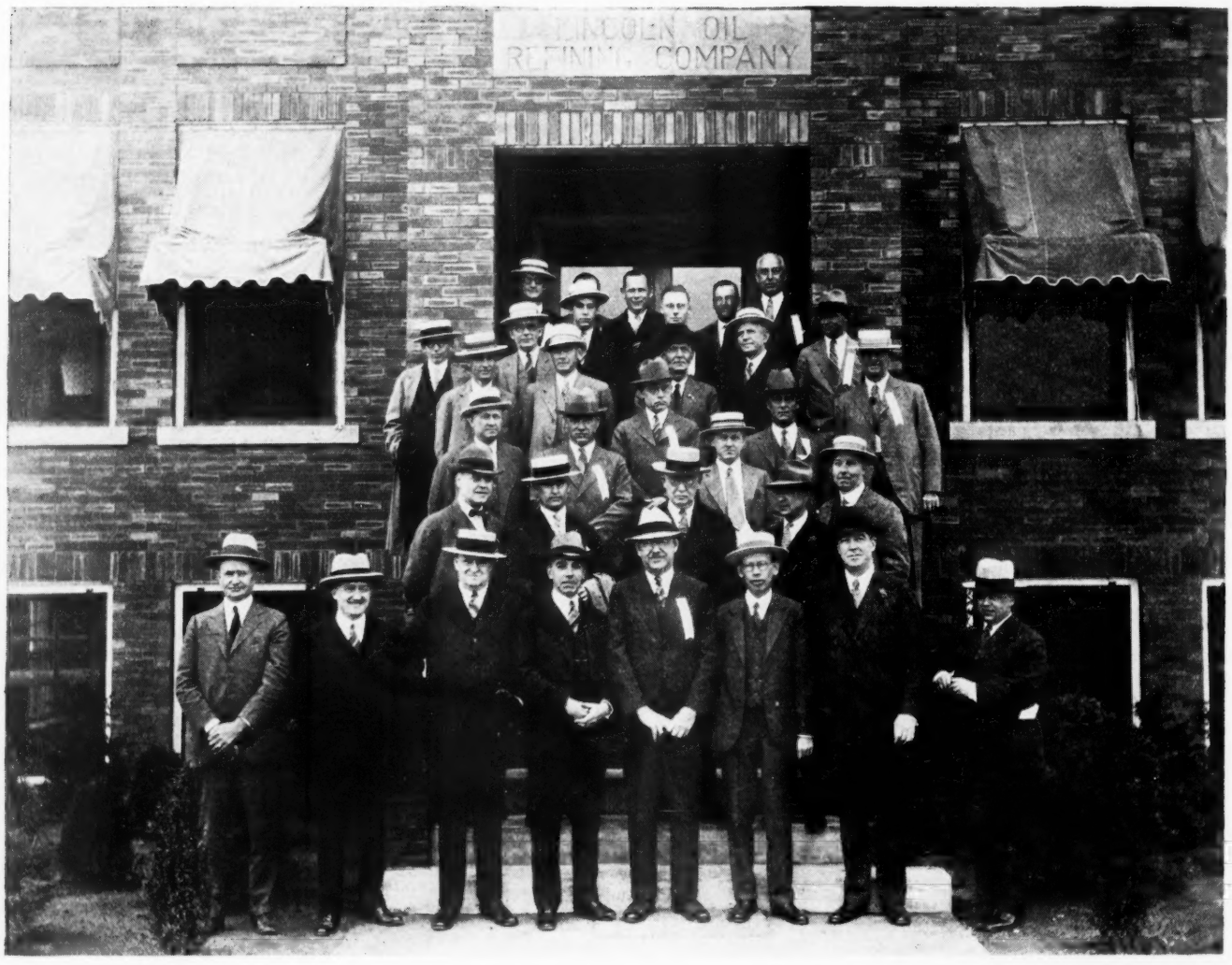
The plant runs on Illinois crude produced by the Ohio Oil Co. and brought to the plant by pipe line. The pipe still handles 5000 barrels a day. In one pass through the pipe still, gasoline, kerosene, two grades of gas oil, and wax distillate are taken off overhead. The residue from the pipe still is a flux of 15 to 16 A.P.I. gravity.

THE gasoline as it comes off the pipe still is a finished product except for an acid and soda treat. Part of the kerosene is re-run. The two grades of gas oil are mixed together to make charging stock for the Holmes-Manley cracking stills, the wax distillate is cracked to make it pressible and the residue is run down to a flux of 11 A.P.I. gravity, to yield overhead a considerable further percentage of wax distillate and as a residue a heavy asphaltic oil that finds a good market for roofing and paving purposes.

The nine shell stills, operating batch, are used for rerunning the kerosene, cracking the wax distillate, running down the flux and also for re-running the pressed distillate to get the proper viscosity. Right now three old Conerty cracking stills are being remodeled into asphalt stills and Mr. Deming expects to put in airblowing equipment to make asphalt specialties.

From the batch stills the cracked wax distillate goes to the wax plant. This consists of a 25-ton Carbondale refrigerating plant and three Carbondale hydraulic presses, two of 36-inch size and one 48 inches. From the presses, the presser neutrals go back to the batch stills for reduction to viscosity specifications.

Then the neutrals go to the treating plant. Treating this oil is a simple matter. It has a bloom or bluish cast and to debloom it the oil is given a very light sulfuric acid treat. One pound to the barrel of 60-degree acid is used and the acid product thrown down by the addition of flowers of sulfur. Intimate mixture of the oil and acid is accomplished by the ordinary air-blowing method. Although the oil barely shows any acidity after treating, it is given a light caustic soda wash



Some of the guests and hosts at the open house party held by the Ohio Oil Co. and the Lincoln Oil Refining Co. at the Lincoln's Refinery, Robinson, Ill. O. D. Donnell, president of the Ohio Oil Co., is the third man from the right in the front row. At his left is Lauren J. Drake, president of the Union Tank Car Co. The picture was taken in front of the Lincoln's new office building.

Hosts and Guests at Lincoln Oil Refining Co.'s Party

O. D. Donnell, president Ohio Oil Co., Findlay, O.
H. L. Deming, manager Lincoln Oil Refining Co., Robinson, Ill.
H. B. Carpenter, vice president, Lincoln Oil Refining Co., Findlay, O.
J. K. Kerr, vice president, Ohio Oil Co., Findlay, O.
L. Fitzpatrick, Ohio Oil Co., Findlay, O.
J. C. Donnell II, Ohio Oil Co., Findlay, O.
J. P. Sutton, Ohio Oil Co., Findlay, O.
Frank B. Firmin, Ohio Oil Co., Findlay, O.
E. W. Evans, traffic manager, Ohio Oil Co., Findlay, O.
H. H. West, Ohio Oil Co., Findlay, O.
C. C. Carroll, general superintendent Ohio Oil Co., Marshall, Ill.
William McCaman, superintendent, Ohio Oil Co., Robinson, Ill.
O. H. Tracy, superintendent Ohio Oil Co., Bridgeport, Ill.
J. F. Reglin, superintendent, Ohio Oil Co., Marshall, Ill.
Andrew Faust, Ohio Oil Co., Lawrenceville, Ill.
F. B. Fretter, President National Refining Co., Cleveland.
Mr. Pemrow, National Refining Co., Cleveland.
W. H. Foster, vice president, Standard Oil Co., of Ohio, Cleveland.
P. J. Shouvlin, Superior Gas Engine Co., Springfield, O.
John Shouvlin, Superior Gas Engine Co., Springfield, O.
Dan Shouvlin, Superior Gas Engine Co., Springfield, O.
Lauren J. Drake, president Union Tank Car Co., Chicago.
B. C. Graves, vice president, Union Tank Car Co., Chicago.
G. W. Hanneken, superintendent Toledo refinery Standard Oil Co., of Ohio.
T. A. Marsh, Combustion Engineering Corp., Chicago.
C. E. Miller, James B. Berry's Sons Co., Chicago.
F. E. O'Meara, Westinghouse Electrical & Manufacturing Co., St. Louis.
Mr. Thach, Westinghouse Electric & Manufacturing Co., St. Louis.
F. B. Bowes, vice president Illinois Central R. R., Chicago.
F. H. Law, general freight agent, Illinois Central R. R., Chicago.
W. Haywood, Illinois Central R. R., Chicago.
H. J. Roth, Illinois Central R. R., Chicago.
J. W. Graham, general traffic manager, Nickel Plate R. R., Cleveland.
Mr. Lepley, engineering department, Atlantic Refining Co., Philadelphia.
Paul Truesdell, National Petroleum News, Cleveland.

Additional members of the Lincoln Oil Refining Co. for dinner in the evening:

R. E. Luton, general superintendent.
H. A. Glathart, chief engineer.
N. T. Stover, sales manager.
G. W. Uzzell, assistant general superintendent.
J. R. Dowd, assistant general superintendent.
W. M. Hastings, assistant general superintendent.
T. W. Culmer, chief chemist.
R. H. Nicholson, efficiency engineer.
R. S. Willard, assistant chief chemist.

in another agitator to assure a perfectly neutral product.

The acid is reclaimed from the sludge and reconcentrated to 60 degrees in a Simonson-Mantius plant. From the agitator the neutral, having about a No. 7 color, goes to the filter house.

This consists of 14 10-ton percolating filters using 30-60 mesh fuller's earth. The filter house also has a clay burning furnace in which the spent clay is roasted by gravitating from a hopper on top of the furnace down alternately slanting baffles in direct contact with the products of combustion from an oil burner in the front of the furnace.

The roasted earth gravitates out of the furnace into a 14-inch line through which it is blown by means of a motor driven blower into storage bins on top of the filter house. The clay is burned and reused eight times. The neutral oil is filtered to No. 3 color.

The wax from the presses is sweated in the usual manner to 124-126

A. m. p. and is filtered to color. The operation of the cracking plant will be described in an article to be published in the June 29 issue.

The New Power Plant

One of the show places in the refinery is the new power plant. This is a modern building of concrete, brick and steel, with wire glass windows and steel sash. It houses three Vogt 500-horsepower water tube boilers. These are equipped with Coxe chain grate stokers, steam engine driven, installed by the Combustion Engineering Corp.

The boilers are equipped with radiant heat superheaters and with both forced and induced draft fans, motor driven. They are automatically controlled by the Carrick control system. In this the steam pressure of the boilers actuates a mercury column which acts directly on the dampers and on the draft. A drop in steam pressure means that the controlling device opens the dampers and increases the draft and the inlet of air.

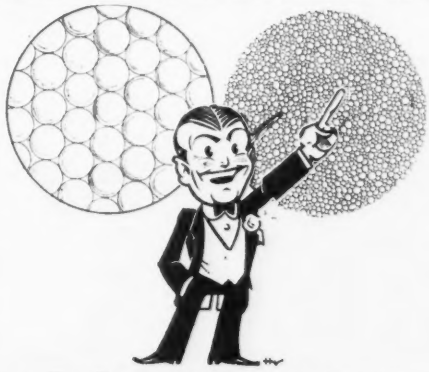
The performance of the boilers is recorded constantly by a Bailey steam flow-air flow system, which shows every detail of the boilers' operation, how often the tubes are blown down with the hot steam soot blowing equipment by the man on watch, and so on. Two of the boilers are operating all the time, the third being a standby. The boilers are run at times as high as 300 per cent of rating. Bailey draft gages also are installed.

ILLINOIS coal, known as No. 5 carbon, which grades from three-eighths inch lumps to dust, the cheapest coal obtainable and inch and a quarter screenings are burned. The ashes fall continuously from the end of the stoker grates into a steel hopper equipped with pneumatically operated gates by means of which the ashes can be dumped into a truck or into a railroad gondola, the railroad tracks running underneath the ash hopper.

An inclined tipple rises from the ground to the coal bunker at the top of the boiler house. A motor driven winch above the bunker hauls the loaded coal cars by means of a steel cable up to the top of the boiler house where the cars are dumped into the bunker.

Steam goes from the boilers at 250 pounds pressure and 100 degrees of superheat, to two Westinghouse two-stage steam turbines, operating at 3600 r.p.m. These are direct connected to Westinghouse 1250 K.V.A. 440-volt generators. In the header delivering the steam to the turbines is a valve by which part of the steam can be by-passed for high pressure plant use if desired.

Also, steam can be bled off after the first wheel of the turbine, at 125 pounds pressure for the process and other plant uses and can be returned under one to two pounds pressure to the second or low stage



CAMPBELL BUBBLES *Void the Voids*

The Campbell theory of tiny bubbles — billions of them — has proven correct by performance of every Campbell installation. In place of large bubbles, the area within a Campbell Cil-Froth Absorber is filled with tiny bubbles, rubbing against one another, contorting, elongating, breaking and remaking—thus effecting intimate contact of gas with the film upon each bubble. Thorough absorption is the result.

Descriptive literature upon request.

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Consulting—Designing—Constructing
Natural Gas Engineer

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WE build efficient natural gasoline and vapor recovery plants. Also examine processes, plants and properties.

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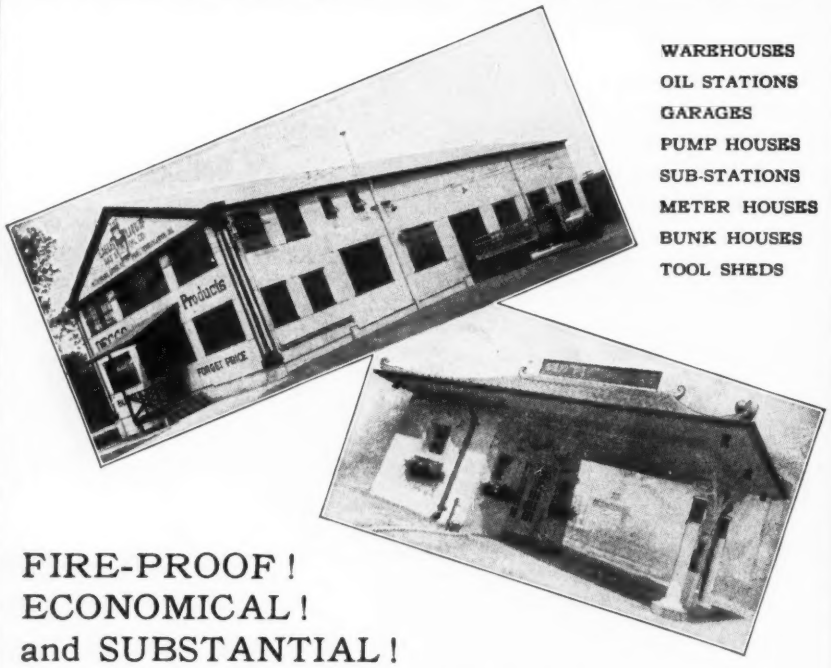

WAREHOUSES
OIL STATIONS
GARAGES
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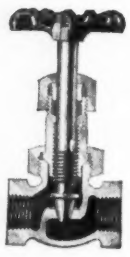

Sectional view. Fig. 705, Jenkins Needle Globe Valve, with bronze spindle.

Jenkins Needle Valves, furnished in sizes 1/8" to 1/2", are the smallest members of the Jenkins family. Yet they are far from little in point of performance, each being built for the maximum service, not merely the average.

Jenkins Needle Valves are perfectly suited for controlling oil, gas, gasoline, air and other fluids that require close regulation.

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wheel of the turbine. Only one of the turbines is used at a time, the other being a standby. The turbines, according to usual practice, are set on bases supported on pillars and separated from the concrete floor of the boiler house proper by a space about half an inch wide, this to prevent the vibration from possibly cracking the floor.

THE generators furnish power to run motors for various uses all over the refinery and also operate two pumps in the company's water pumping station at Palestine, nearby, which delivers water for refinery use from two wells at the rate of 800 to 1000 gallons a minute.

The turbines are full condensing, the condenser system being held under a vacuum of 28 to 29 inches of mercury. All the condensed water from the turbines, together with the condensate collected from the traps in the steam transmission lines throughout the plant, are returned to an open tank as distilled boiler feed water. The feed water is delivered to the boilers by a centrifugal, motor driven pump, with a steam turbine driven centrifugal standing by ready for instant service in case of failure of the electric power. Because of the return of the condensate for boiler feed, very little makeup water is needed. Feed water goes to the boiler at about 150 F.

The full condensing feature of the turbines at this plant was pointed out as a special advantage in a refinery where distillation practice is constantly changing because it makes possible satisfactory adjustment of the steam load. One refinery executive who was a visitor stated that his plant had non-condensing turbo-generators which must be torn out and replaced with the condensing type.

When the non-condensing turbines were put in, their operation was figured on the then demand for process steam. Since then refinery operations are so changed that almost no steam is used in distillation with the result that the steam, after it leaves the turbines, serves no useful purpose and cannot be condensed as feed water.

In the Lincoln plant, steam going to each department is measured by a Bailey meter.

With plenty of current available, nearly all the pumps in the plant are motor driven and they are nearly all of the centrifugal type. Worthington and Goulds equipment is used almost entirely. The main pump house is new and of most modern design. It is equipped with centrifugal pumps for the handling of various grades of oil, each pump driven by its individual motor, with a fire wall between motor and pump.

There is also a small vacuum pump for priming the centrifugals and standby steam pumps for use in case of electric power failure.

Care and Use of Belting in Oil Industry

By David L. Trax
Gipsy Oil Co., Tulsa

(Read Before A. P. I. Standardization Conference, Colorado Springs, June 17)

THE proper care and use of belting includes vastly more than careful selection and manual handling of the belting itself. It involves also the design, installation, adjustment and regular inspection of both driving and driven equipment, also, many other things in the way of organization and vestment of responsibility and authority.

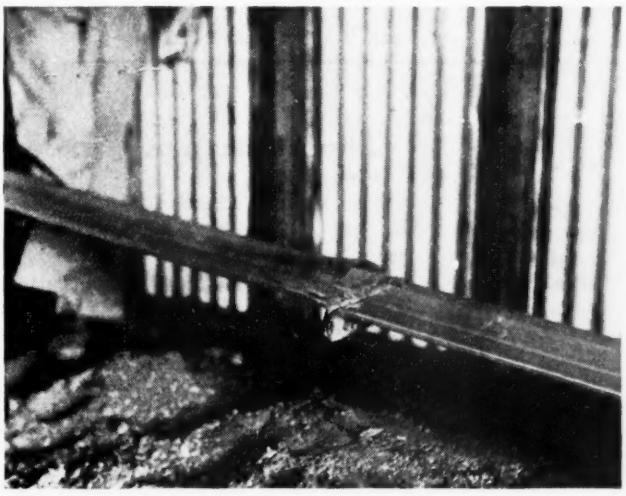
On account of the transitory nature of oil field work the installations cannot be as carefully put in as in a factory where they are installed with more permanence; consequently there are many installations in the oil fields where the band wheels and driving pulleys are out of alignment and belts either run several inches off the pulleys or are kept on by a piece of wood or iron against which the edges of belt run, causing fraying. Frequently band wheels and pulleys are in poor condition which, of course, is injurious to the belt.

Most belts are put on in the oil fields by men who are not mechanics and wrong methods are often adopted, such as nailing the belts on the band wheel and starting the engines. This is very apt not only to tear the belt but if the belt is cut too short, it will rupture the fabric where the belt goes over the edge of the band wheel.

The oil field belt fastener is not the best type of fastener for any type of belt because it bends the belt up at right angles and is so heavy that it causes a whipping motion of the belt with the prevalent uneven loads. In many cases the bolts of the fasteners are not properly tightened, with the result that the tension of the belt pulls directly against the bolts instead of a frictional grip over complete width of fastener and eventually belt will pull out of fastener. Also, in punching holes for fastener they are not lined up with a square so that an uneven joint is made, causing undue strain on one edge of belt.

In handling belts in the oil fields, it should be borne in mind that at all times they should be well protected from the elements, snow, wind, rain and dust.

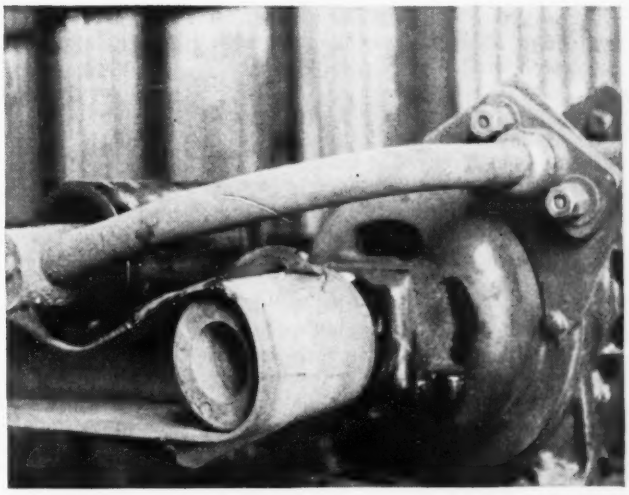
To summarize briefly, the principal abuses to which belting is subjected



Result of using straight-edged fastener. Note ply separation.

Twelve-inch belt running on broken pulley. Note coating of paraffin on pulley and misalignment. Break probably due to heavy pounding of clamp on pulley.

Effect of oil on belting which has been placed on a greasy floor when not in use.



Results of running heavy ply belt over a small pulley with idler. Note ply separation.

LINING RIGHT UP WITH THE REST

in the oil fields are as follows:

Belt too loose, allowing it to slip one way or the other, or too tight, causing undue strain in belt.

Pulleys out of alignment, allowing one edge of belt to overhang, causing all the strain on the other edge.

Too light a belt used for the work required.

Improper joining of ends, ends of belt not cut at right angles to edge and bolt holes not in alignment with square end, causing ends to be joined crooked.

Bolts in fasteners not tightened up properly.

Wrong method of putting on belts.

OIL from bearings dropping on edge of belt, causing that edge to stretch and deterioration of belt as a whole.

Too much sticky or gummy belt dressing applied and piling up on pulleys or belt, causing irregular surface, resulting in increased slippage and ply separation.

Belt houses in poor condition, giving no protection to belt against weather conditions.

As a correction for the principal abuses of belting in the oil industry I wish to offer the following recommendations:

Install equipment so that all pulleys will be centered and balanced and the shafts carrying them perfectly in line, parallel and in the same plane. Adjustments should be made to keep pulleys in alignment so that belt will run in center. Pulleys should be at least two inches wider than belt they are to carry.

The proper size belt should be determined for each individual job.

All belts should be installed, using a belt stretcher and thereafter when it is necessary to cut same.

In joining the ends, the belt should be cut, using a square so that the end will be at right angles to the edge and bolt holes punched parallel to this end. The bolts in fastener should be tightened at regular intervals to insure a frictional grip of fastener.

Lubricating oil should be kept from belts by installing guards on pans.

No gummy belt dressing should be applied to belts but if necessary to use a belt dressing, use vegetable castor oil very sparingly.

Belt houses should be kept in good repair at all times as protection against weather conditions.

I wish to emphasize the fact that by careful and regular inspections of belting in service, and by a systematic educational program among the operators on the care and use of belting, many belting troubles will be eliminated and a higher percentage of effective work secured with less loss of production.

CLEVELAND—Frank T. Bailey, 233 S. Verdugo St., Glendale, Calif., was in Chicago and Cleveland recently calling on the heads of several of the largest oil companies in behalf of a service station merchandising idea he has developed.

Three Locations Made For Pecos Tests

Staff Special

TULSA, June 16.—Three locations have been announced for test wells to be drilled in Pecos county, Texas, southwest of the Yates pool, by the Altitude Petroleum Co., and the Olean Petroleum Co. The Olean will drill the tests at locations announced as follows: in center of southwest of G. C. & S. F. sec. 82, block R-3; center of northwest of G.C. & S.F. sec. 31, block C-4; and center of southeast of Texas Central Railway sec. 98, block A-2.

Three blocks, mainly out of the Sherbino and Harrel ranches, were originally assembled by Altitude Petroleum and its associates, who interested Olean Petroleum in the total of approximately 23,000 acres. Acreage spreads out of these blocks were sold to various interests, including Phillips Petroleum Co., Transcontinental Oil Co., McMan Oil & Gas Co., John H. Markham, Jr., Shaffer Oil & Refining Co., Harwell Oil & Gas Co., Atlantic Oil Producing Co., Selby Oil & Gas Co., and others.

Selden Truck Corp., Rochester, N. Y., announces that John R. Dean has taken over the management of the service department of the company and George Foos has been promoted to assistant service manager.

The Editors' Viewpoint

National Petroleum News

Fewer Wild Statements In Oil Advertising

By Warren C. Platt—Editor

AT LAST we can say something nice about some motor oil advertising.

A change has set in. No longer are companies trying to scare the daylights out of the automobile owner and convince him that all of the ills of his car, whether due to shortage of water, lack of air in the tires or poor driving or what, are due not only to faulty lubrication, but poor lubricants. The day seems to be passing when a number of people in the oil industry, especially among the leaders, are using untrue statements to sell their goods.

No lubricant, that has yet been devised, is going to overcome a full 100 per cent all wear and tear in a bearing, nor as long as human beings are human will they take the care they should in order to get a 100 per cent return even from a 100 per cent lubricant. So it has been futile for many in the oil industry to point to the fact that cars wear out as a criticism of the other man's particular lubricating oil. Machinery has worn out in the past, it is wearing out today and it is going to continue to wear out in the future, at least for a great many more years that any of us are going to be on this earth. All that the steel makers, and the oil men, and the manufacturers' engineers can do is step by step, reduce somewhat this loss of wearing out.

Most companies have never mentioned the wearing out feature. They have just said their products are good and let it go at that, and in practically all these cases the public has been willing to accept their word for it and use profitable quantities of those products. For a long time the Canfield Oil Co. of Cleveland, O., has been telling its consumer customers even a bit more. They have gone so far as to say that the Canfield products "won't grind your valves, replace your spark plugs, remove dirt from your carburetor or tighten your piston rings." That is a sane, conservative statement which has been much needed in the case of some oil advertising.

Then there is the Sinclair Refining Co., which in its national advertising this year, frankly states that automobiles wear and no oil in the world will entirely stop that wear and then it gets in its sales argument that the grade of oil, whether light or heavy, should be according to the amount of wear a car has had. But it is friendly advertising, friendly to the car owner and friendly to other oil companies.

Now comes the Tide Water-Associated Oil Co. in a recent advertisement to the general public in which it says: "Repair-men blame 75 per cent of all car repairs on faulty lubrication. They would be nearer the truth if they blamed most repairs on the fact that the average car owner doesn't know how, where or when to lubricate his car, and so the job is seldom done regularly or correctly."

It is true that repair-men blamed at least 75 per cent of the car's trouble on to the oil and gasoline, but they have done this simply to "pass the buck." It has been their pet alibi. We undoubtedly all know of our own knowledge of many cases where automobile repair-men, garage-men and even factory branches of reputable automobile companies have solemnly informed car owners that they wouldn't have that particular trouble, whatever it was, if they had used the oil that the factory had recommended.

Oil companies, in the heat of their competition for motor oil business, have played to this alibi weakness of the repairman to the great detriment of the oil industry and of themselves.

While superlatives have often been used and are being much used today in advertising and sales work, it has long been proved that the public discounts very greatly all superlatives. When you say that your product is the best, the public knows that that is just your opinion and that the chances are it isn't. The public doesn't waste much time thinking about it. This has been proved by check with the public time and time again, but somehow some advertisers and some salesmen still don't appreciate it.

We hope this dropping of superlatives in oil advertising and sales work and leaving the other man's product alone is a change which has come to stay.

Profit Per Unit Necessary to Prosper

THE motto, which the automobile manufacturers have placed on their office and factory walls for 1927, is that which the oil industry should adopt. An editorial in a recent issue of Automotive Industries, says:

> The cry of "More Profit Per Unit" will have to replace the old one of "More Units For Profit" if a large proportion of car builders are to continue past successes into the future. Study of the final detailed production figures for 1926 serves to emphasize again very strongly that the manufacturer's chief current problem is finding ways and means of getting adequate profit without operating his plants at 100 per cent capacity.

That is and has been for several years the problem before the oil refiners. While cutting operating costs by increasing output is commendable, such reductions in costs are of no avail if the product must be sold at a loss. Reducing output, even though it increased costs a little bit, but reducing it to the extent of raising the price to a reasonable one, is the only way that profit can be obtained in oil or any other business. Manufacturing more than a market will absorb is of value to no one. Even the consumer in the long run must pay for it.—W. C. P.

Artistic, Substantial Filling Stations

Made of galvanized steel. Patented interlocking joints make a weather-tight, strong building. Easily erected in a day. The only tools needed for erecting are hammer, pliers, and screw-driver.

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Marion Machine, Foundry & Supply Co.
Box T 685, Marion, Ind.

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GASOLINE
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GAS OILS
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RED AND PALE PARAFFINE OILS

High School Pupils Write Spindle Top History

BEAUMONT, Tex., June 18.—Oil paper editors, U. S. Geological Survey men and Isaac Marcosson are not the only ones who immortalize oil with pen and press. High school pupils have their fling, too.

The "History and Development of Spindle Top," a late contribution to oil literature, has just been written and published by undergraduate students of Beaumont high school as part of their English course, under the direction of George W. Norvell, supervisor of Beaumont public schools.

An attempt has been made to present an accurate account of the field from its discovery in 1901 to the present day in as interesting a manner as possible. Material for the book has been gathered from various oil trade journals, including NATIONAL PETROLEUM NEWS, from oil country newspapers, the U. S. Bureau of Mines, U. S. Geological Survey, and from old-time as well as present operators in the field.

The book has 63 pages and opens with the bringing in of the Lucas "Gusher" in 1901, reputed to have produced from 75,000 to 100,000 barrels initial. It tells of the peak days when Spindle Top production reached 17,421,000 barrels in 1902, then declined to its minimum of 289,000 barrels in 1922, and again when, having staged its now famous "come-back" in 1925, production climbed to 15,040,667 barrels in 1926.

The new Spindle Top is discovered on page 14, in spite of Mr. Marcosson's requiem in "The Black Golconda" published in 1924, when on Nov. 16, 1925 the Yount-Lee Oil Co. brought in a well at 2518 feet, causing daily average production to mount to 60,000 barrels daily today, from a previous 10-year daily average of 1024 barrels.

The geology of Spindle Top, its oil shipping and refining facilities are discussed. The important early operators and discoverer of the field and present day operators whose biographies are included are: George W. Carroll, Pattillo Higgins, Capt. A. F. Lucas, Marrs McLean, W. P. H. McFaddin, Capt. George W. O'Brien, Chenault O'Brien, J. H. Phelan, T. F. Rothwell, James F. Weed, William Wiess and M. F. Yount.

Authors of the book are: Thelma Johnson, Mary Etta Bennison, Clara Ripperton, Grace Newton, Seawillow Pipkin, Jack Nahas and Jim Keith.

INDIANAPOLIS, Ind.—B. A. Gwynn, formerly salesman at Muncie, Ind., for the Roxana Petroleum Corp., has been promoted to supervisor of service stations. Previous to his sales work, he was in charge of service stations at Indianapolis for the Roxana.

Pressure Restoration Boosts Output 163% on Wiser Oil Leases

By A. F. Hinton
N. P. N. STAFF WRITER

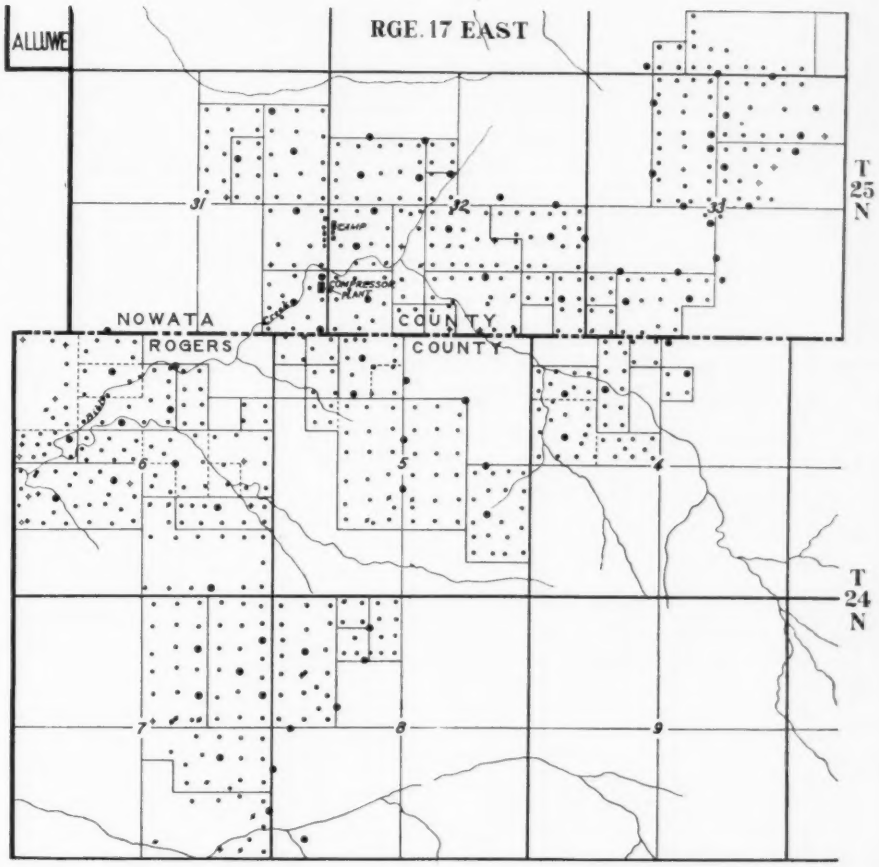
BARTLESVILLE, Okla., June 17. RESTORATION of pressure in oil sands with gas or air is literally "all the rage" in the shallow fields of northeastern Oklahoma, where conditions are peculiarly well adapted to the process. In the district are thousands of wells averaging less than a half-barrel of oil a day under ordinary pumping conditions, with an evenly distributed sand of fairly uniform depth and thickness. Probably 90 per cent of the properties in the Nowata-Delaware-Chelsea district are under pressure.

In most cases, the pressure restoration has served to increase production materially and to hold it at a much higher level than maintained before the pressure was applied. There are instances, of course, where it failed, or where experimentation is still going on after lack of success in earlier efforts to restore pressure. Principal cause of failure when it occurs is tight sand conditions which resist application of the compressed gas or air and in which the pressure wells will not take sufficient volume under obtainable pressures to have much effect on production.

One of the most consistent users of pressure restoration, and one of the most successful in its application, is the Wiser Oil Co., which has headquarters in Bartlesville. This company has a number of large blocks of acreage in the Nowata district, and recently had 1,212 wells operating under pressure, with five compressor plants at strategic points. The wells are handled in groups of leases, each with a centrally located plant, the groups usually being cut off from one another by properties of other companies.

In general, the company has selected centrally located oil wells for conversion into pressure wells, drilling new wells for pressure purposes only where no old well existed at or near the desired location. In most cases, where wells are drilled for use as pressure points, they are located along property lines on boundaries between the Wiser and other companies, where the latter are co-operating in the repressuring work.

Application of pressure was preceded on each group of properties by a thorough study of sand conditions in the area. All of this production is old, dating back to the first developments in the Mid-Continent field, and necessarily many records are lacking as to sand depths, casing points, well-logs, and the like. Many of the properties now under pressure were purchased by the Wiser company years after they had been drilled and on most of these all early production records as well as logs and other needed information were not available. In all wells drilled by the company, however, complete records have been preserved.



Wiser Oil Co. pressure restoration project, Alluwe group, Nowata and Rogers counties, Okla. Pressure wells are shown with large circles. The properties have 562 oil wells and 75 pressure wells. The heavy lines define sections, one mile square

Since beginning the re-pressuring work, the company has made it a practice, whenever it is necessary to drill a well, to take cores of the sand. These cores or samples are sent to a testing laboratory in Kansas City for determination of oil content, porosity, and saturation. Such analysis is helpful in predetermining amount of pressure and volume of air or gas that will be necessary in the locality. An average of the tests of sand samples so far made indicates about 5,000 barrels to the acre is still in the sand, after the wells have produced steadily, in some instances, for 25 years.

Whenever it is obtainable, gas is used rather than air, as the Wiser officials believe it is preferable. However, gas is scarce in the district, in large enough quantities for repressuring, and only about one-fourth of its daily volume is gas. At present, they are injecting about 4,000,000 cubic feet of air into the wells daily, and 1,500,000 cubic feet of gas.

In the case of every block of leases except one, the Wiser company has found the application of pressure successful in greatly increasing production and in holding it in most cases at a rate that is still increasing a year and a half after first application of pressure. In the one exception the company still hopes and believes continued work and experi-

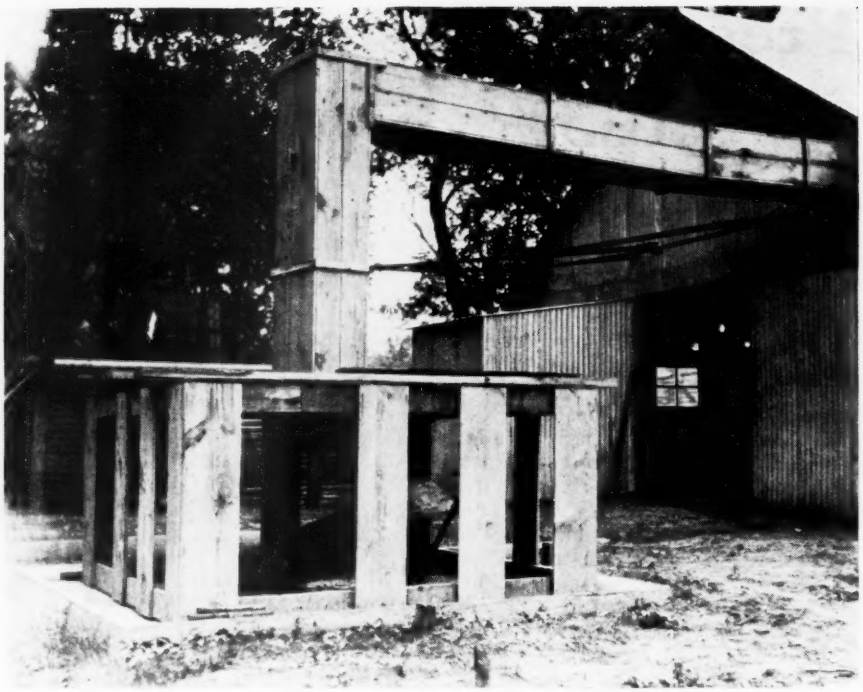
mentation will result in increasing that property's production.

The company's five pressure plants serve 67 to 562 wells each. Pressure wells in the vast majority of cases are old oil wells converted, their location being selected with reference to position of surrounding wells. An average for all five groups shows that the ratio of pressure wells to oil wells is about 1 to 8. In cases where neighboring lease owners join the Wiser company in pressure restoration, pressure wells are drilled along boundary line between the properties. In such arrangements, the companies share equally in cost of drilling these line pressure wells and the Wiser delivers compressed air or gas practically at cost.

WISER'S Milam plant in section 12-25-16E, Nowata county, has a 165 h. p. Bessemer direct connected gas engine-compressor, operating at 215 pounds pressure. This group has 15 pressure wells and 120 oil wells. The Hammet plant, in 19-25-17, Nowata county, is delivering pressure through 19 wells to 175 oil wells. This plant also consists of a 165 h. p. Bessemer, which is operated at about 245 pounds pressure. Bartlesville sand under this group is found at about 450 feet.

The Mehlin plant, in 20-25-17, has 288 oil wells and about 35 pressure wells. A 165 h. p. Bessemer is pumping in compressed air at 150 pounds pressure. The Simpson plant, smallest of the group, and the one referred to previously as not having been successful in increasing production, is in section 19-24-14, Rogers county, at the south end of the company's holdings. This plant has an Ingersoll-Rand compressor operated by a 65 h. p. Foos gas engine. The 67 wells in the group are light producers and the sand is apparently much tighter here than in other parts of the field.

General Superintendent Hutchinson and District Superintendent Meyers, Wiser Oil Co., Nowata district, Okla. N. P. N. Staff Photo.



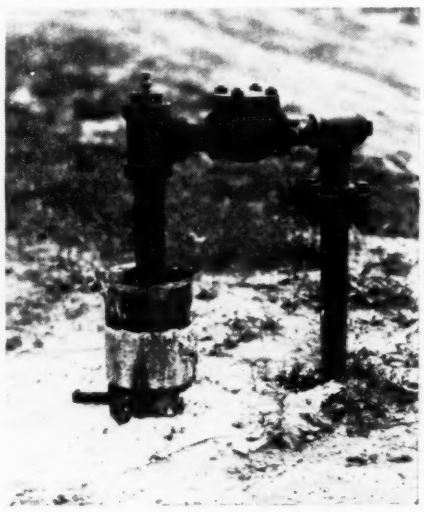
Air intake, Wiser Oil Co. compressor station. In summer frame work is covered with burlap kept wet with running water. This cools and cleans air taken into compressor. N. P. N. Staff Photo

THE largest of the company's repressuring operations is known as Group No. 4, comprising the leases around the gasoline plant, near Alluwe. This group of properties has 562 oil wells and about 75 pressure wells. The map and chart accompanying this article refer only to this group. This plant is in section 31-25-17. The gasoline plant is of the compression type and residue gas under pressure is delivered direct from the plant to the pressure wells. In addition, one 165 h.p. Bessemer gas engine-compressor is in operation without connection with the gasoline plant, although in the same main building.

To secure best results with pressure restoration, the company believes it is best to cease pulling vacuum on the wells. All its wells were on vacuum before the repressuring work was started, but most vacuum plants have been shut down. The only vacuum being employed is in line wells adjoining properties which do not use pressure restoration. By pulling a light vacuum on these wells, it is believed that effects of the pressure can be confined to the Wiser leases without straying across the line and benefiting some other company's production.

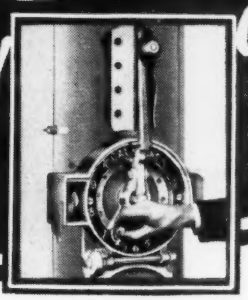
In the Alluwe group, the first gas was applied late in December, 1925. First effects on production were noted about one month later. When this work was begun, gas was used as the repressuring medium, the company having built a 6-inch line seven miles northeast to a Burgess-sand gas field. This gas was depleted rapidly, however, and it was soon necessary to change over to air, saving the gas for fuel only. At present they are getting enough gas to run three compressor plants. This period of declining gas shows plainly on the chart during March and April, 1926.

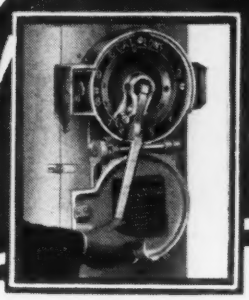
The chart shows that during 1925, net production of the group of leases varied between a low of 87 barrels and a high of 141 barrels a day, averaging about 132 barrels over the year. This production being derived from more than 600 wells, the av-

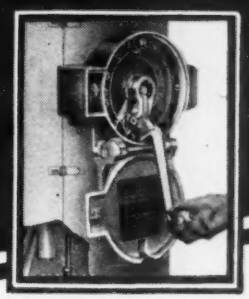


Typical surface equipment of pressure well of Wiser Oil Co. Well is equipped with check valve so that if compressor is down pressure is held on well until service is restored. N. P. N. Staff Photo.

speedy service







ready!---

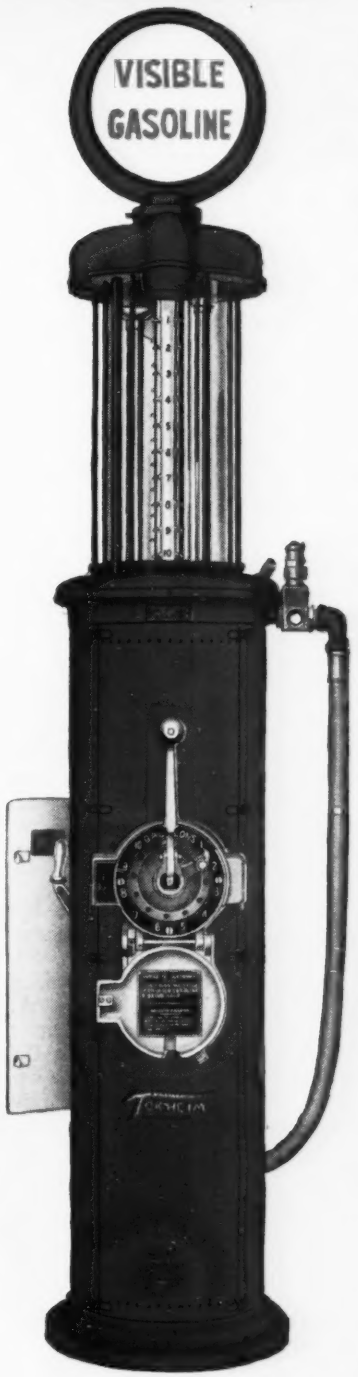
—move Quantity Indicator to required number of gallons

get set!---

— swing Master Control Lever around dial until it automatically stops at Quantity Indicator

go!---

—pull out on Master Control Lever to discharge gasoline



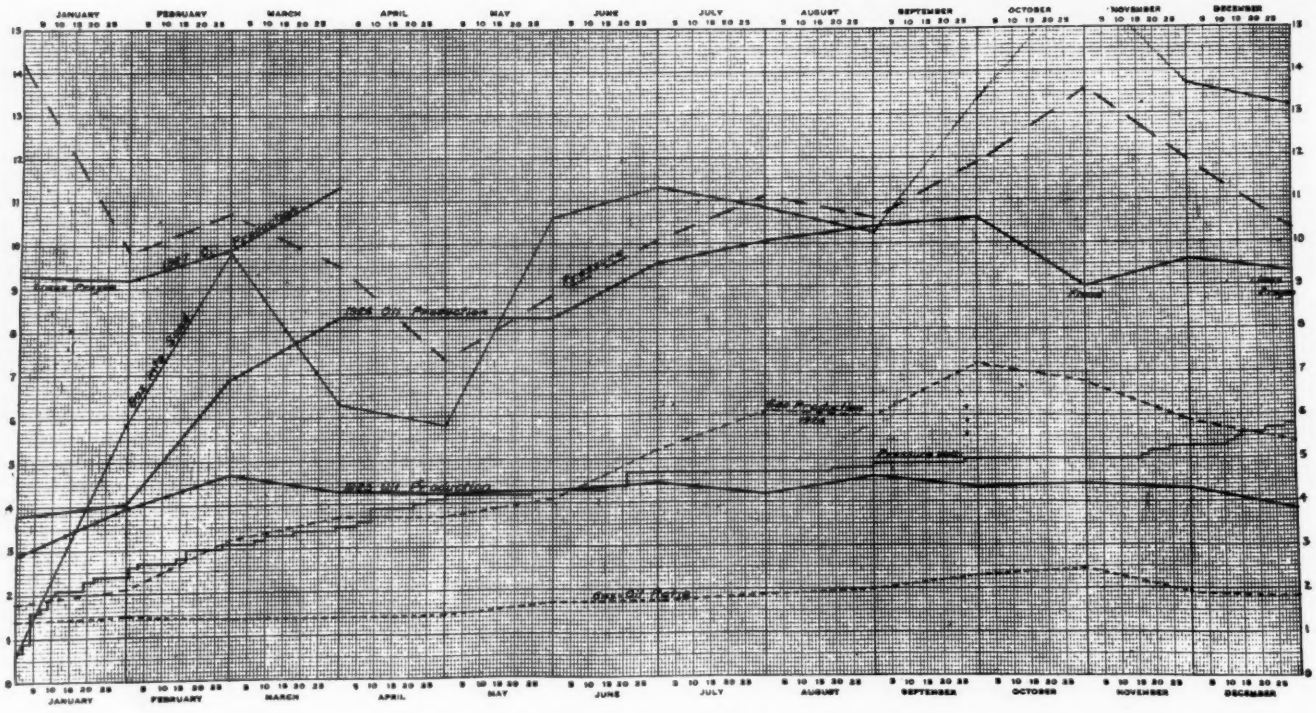
Just 3 operations

to discharge gasoline with the Tokheim Master Control Cut 600-605. Like the track man—tensely awaiting the starting gun—it's just a matter of following the three-fold instructions—"Ready!—get set!—go!" Tokheim Cut 600-605 discharges any number of gallons, from 1 to 10, each accurately measured and recorded—"to the last drop." The service is speedy and exact; the kind of service that makes a hit with customers and builds more business for the marketer. Write Department "M" for full information about Tokheim Cut 600-605, "America's greatest visible gasoline pump."

QUALITY TOKHEIM Oil Tank & Pump Co.
Fort Wayne, Ind. U.S.A.

QUALITY TOKHEIM

FILLING STATION EQUIPMENT



Production record since repressuring was begun on Wiser Oil Co.'s Alluwe group, Nowata and Rogers counties, Okla. Net oil production is platted 30 barrels to each numbered division of chart. Gas into sand and gas production, 100,000 cubic feet to each division. Gas-oil ratio, 1,000 cubic feet per division. Pressure, 10 pounds per division. Pressure wells, 10 per division

erage daily yield per well is seen to have been 0.23 barrel. There were more producing wells then than now because the wells now used for injecting pressure were then producing oil. Production in this group is from the Bartlesville sand, found at average depth of 450 feet and which is 25 feet thick.

During January, 1926, the group averaged 114 barrels daily. During March, it averaged 249 barrels a day. After maintaining this level in April and May, during the period of declining gas volume, the group jumped 285 barrels daily average in June. It continued increasing steadily, until in September daily average production was 315 barrels. Thus, in the ninth month after repressuring was begun, the property was making 2.77 times as much oil as it had been making, and the per-well average had risen from 0.23 to 0.56 barrel.

During October and part of November, 1926, northeastern Oklahoma suffered from disastrous floods for weeks and production was paralyzed. During the floods output of the Alluwe group fell, but maintained an average of 270 barrels a day in October and 288 barrels a day in November. In December, 1926, and January, 1927, cold weather and frozen lines held production down to 279 and 276 barrels, respectively. With better weather, production again started upward, averaging 297 barrels a day in February. In March, the last month recorded on the chart, the group averaged 339 barrels a day, an increase of 163 per cent over the corresponding month two years before.

U. S. Government Encouraging Production of Helium

WASHINGTON, June, 13

AN ENTERPRISE in which the navy wishes the natural gas or the chemical industry or both would take a greater interest is that of increasing the supply of helium. The army and the navy would like to see the production of helium become a recognized industrial activity to the end that the supply of that inert gas would become more definite without all expense falling on the military establishment.

All the lighter-than-air craft of the military services can use helium. Inasmuch as it is not inflammable it is ideal for that purpose.

For years the government has been obtaining a limited supply of helium by means of a plant at Petrolia, Tex.

At present there is no commercial production of helium but there is a prospect that there will be some during the present year. A contract has been made by the navy with the Kentucky Oxygen-Hydrogen Co. Inc. for the purchase of 1,260,000 cubic feet of helium at $62.15 per 1000 feet. The contract gives the government an option to buy 2,835,000 feet at $40.33 per 1000 feet and 3,780,000 at $34.77. The gas is to be delivered by the contractor free on board cars at its plant near Dexter, Kans., in tanks under a pressure of 2500 pounds per square inch.

The Petrolia plant, so far as known, is now delivering enough helium but in the event of war it could not supply even a small percentage of the gas needed. Development of helium extraction on a commercial scale would put the country on a better military footing. Efforts to bring about such production thus far have brought out only this one company.

Helium, which weighs only one sixth as much as air, being inert, is preferable to hydrogen gas, although helium is about four times the weight of hydrogen. A helium-filled gas bag can be pierced by an inflammable bullet but the gas will not take fire. That quality is what makes it desirable. Its extraction from natural gas was begun at Petrolia during the war.

Helium can be used wherever an inert gas such as nitrogen or carbon dioxide can be used.

However, the contract that has just been let provides that the contracting company shall not sell more than 10 per cent of its production without giving the government the opportunity to buy any quantity in excess of 10 per cent. In other words, there is no intention of promoting the production of helium for use by any other government. Possession of helium is one of the advantages the United States has, other than the men, the money and the materials, for the making of war.

Co-Ops Show Little Enthusiasm About Future in Nebraska

CHICAGO, June 17

CHARLES M. SUTHERLAND, secretary, Nebraska Independent Oil Men's Association, attended a large meeting of farmers at Aurora, Neb., May 31, to hear what they had to say about farmers' co-operative oil companies. He heard their hired orators expound and he talked with the lowly dirt farmers in the outskirts of the crowd.

Mr. Sutherland did not go down for news. He went for impressions and for information which might do his organization good. He published his report in the Nioma Bulletin as follows:

"Your secretary went to Aurora to listen to what the Farmers' Union were to do about putting in a chain of filling stations wherever the local unions were strong enough to finance them.

"About 15 'going farmers' oil companies' were represented. They talked about pooling their orders on lubricating oil but they could come to no agreement on whose oil. They seemed unable to find any new method of disbursing the profits to take place of present method based upon patronage dividends. There was not much enthusiasm shown relative to future operations in the oil business.

"Over 1,000 men, women and children met at Streeter Park, Aurora, at noon for a free dinner given by the Farmer Union Creamery Co., which was opening a new creamery at Aurora. This was the real occasion for the gathering.

"After dinner, a business meeting of the creamery was held in Fidelity hall. It was here we listened in on a real co-operative meeting along lines that we think the farmers are on safe grounds to compete. When it comes to buying milk and cream; making butter and cheese; buying poultry and eggs; buying and marketing live stock; it looks as though the farmers can make money for themselves by co-operating with each other.

"The managers report showed that the Superior Creamery had made $39,688.52 upon an investment of $45,000. In other words a return of 88 per cent upon capital stock. The Fairbury manager reported that the Union had only been operating 10 months, but they had made 100 per cent on their investments. With these returns we can not see why farmers want to go into the oil business.

"What would happen if a few of the oil companies could make 88 per cent on their investments? It gives me heart failure!

"In talking with one of the directors of the State Farmers' Union, he informed that the farmer was going into every line that was making any profit off the farmers. He said the cities and towns were an economic extravagance, and the country could exist without the towns. We are at loss to understand his reasoning. If the city population are compelled to take up farming, the surplus of food products will mount up high, and the price will be brought down, so that farming will no longer be profitable. It seems a busy urban population will afford a market for the foodstuffs, which will keep up the price of farm products. It is a live and let live proposition.

"The high powered co-operative speakers from Chicago, Kansas City and Omaha urged the farmers to possess the machinery that processed their products, in order that they might secure for themselves all the profit that the consumer paid for the products. This would include the machinery for turning their live stock into food; the machinery that turns their wheat, corn and oats into food, the mills, factories, and bakeries. This idea, if it came to pass, would revolutionize the present economic structure.

"At present, there are three creameries operated by farmers at Fremont, Superior and Aurora, and Orleans. These three made over $140,000 in profits in 1926.

"There are three live stock exchanges at Sioux City, Omaha and St. Joseph. These are reported to have made $2,000,000 in the last few years.

"IT IS reported there are over 120,000 farmers in Nebraska. At present only 14,400 are paid up members in the Union which used to have 35,000 members.

"A representative from the Missouri Farmers' Union told the audience that in that state they had marketed 1,528 carloads of eggs, and had sold them at an advance of 3 cents over the prevailing market.

"The manager reported that the failure of the bank at Superior had tied up some of their funds. Just before the bank failed they had about $34,000 on deposit. But a friendly tip on the condition of the bank enabled them to get it all out but $12,000 which was now protected by a guarantee fund.

"It would seem to us that the farmers by using due diligence could make enough money by attending to their business at hand, that the price he pays for gasoline and oil would neither make nor break him.

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Southwest Texas Inadequately Tested At Depth Despite 5000 Wells

HOUSTON, June 17

APPROXIMATELY 5000 wells have been drilled in southwestern Texas, more than one-fourth of them within the past year, Ford Turner, San Antonio district scout for Pure Oil Co., said in a paper read at the Dallas meeting of the National Oil Scouts of America.

Summarizing, he said that out of the 5,000, but 500 wells were drilled deeper than 2,000 feet; a few less than 200 have gone below 3,000 feet, and but 30 have gone below 4,000 feet. Over the greater part of the area, he pointed out, there are chances for oil production as deep as wells can be drilled with present methods and equipment.

The southwest Texas district, as generally considered and as discussed by Turner, comprises some 50 counties, beginning, for the extreme west corner at a point on the Pecos river in the northwest corner of Val Verde county, thence east 250 miles to Austin, thence southeast 175 miles to the Gulf Coast, thence following the coast south to Brownsville about 175 miles, thence up the Rio Grande for 450 miles, approximately 45,000 square miles, or about one-fifth of the area of the state.

TURNER followed oil industry practice in further dividing the area roughly into three districts, viz., the southwest end of the Balcones fault zone; the Laredo district, and the Gulf Coast area. There are at present, he said, approximately 160 active drilling operations, 50 in the Balcones fault zone, 75 in the Laredo district, and 35 in the Gulf Coast area.

"In order to visit the various centers of activity in southwest Texas," he said, "without making the fields or actually scouting all the wildcat wells, it would necessitate a trip of close to 2,000 miles. It is evident, therefore, that scouting work must be split up considerably among the men working this district, involving considerable co-operation and exchange of information because the individual oil companies are employing but from one to three scouts to cover this area."

Turner's discussion took note of the gas development, which probably supersedes other activities over most of the territory. His compilation shows that last year, before a large part of the present market was worked up, 22,250,000,000 cubic feet of gas was produced and sold from south Texas fields.

The largest part of this gas, he said, was taken from the Refugio field, which produced 17½ billion cubic feet from 42 wells. The Lucas field, Live Oak county, was second with 3½ billion cubic feet from 12 wells. The fields in the Laredo district are now foremost in production, with seemingly no limit to the amount that can be developed.

FORD TURNER
Chairman of executive committee of National Oil Scouts of America and San Antonio representative of Pure Oil Co.

"The above figures," he said, "are but a fraction of the amount that could be produced if a larger market were available. The principal gas fields in southwest Texas are Gas Ridge in Bexar county, Adams field in Medina county, the Three Rivers area in Live Oak and McMullen counties, Lucas field in Live Oak county, Refugio field in Refugio county, the White Point area in San Patricio and Nueces counties, Kingsville field in Kleberg county, Carolina-Tex field in Webb county, Cole field in Duval county, the Henne-Winch-Farris field in Jim Hogg county, and several other smaller fields.

"The Houston Oil Company is now handling more gas than all the other gas companies in southwest Texas put together, delivering 82,000,000 cubic feet per day at the present time, almost all of this going to the Texas Gulf Sulphur Company and Freeport Sulphur Company plants and to the Humble refinery near Houston. The Houston is taking approximately 35,000,000 cubic feet, daily from the Cole field, 30,000,000 from the Refugio field, and 17,000,000 from its Lucas field. The Houston Gulf Gas Company is delivering close to 40,000,000 cubic feet daily, principally to the city of Houston and the Southern Gas Company is delivering about 20,000,000 daily to San Antonio and vicinity.

THE present daily oil production from the four principal fields in this district, Luling, Lytton Springs, Somerset, and the Mirando, is approximately 33,000 barrels, all settled production. For this current year, it is estimated that the total production of southwest Texas will be 12,000,000 barrels, taking into account the usual decline and assuming that no new fields will be found.

"Generally speaking, the oil business in southwest Texas is now, and has been for some time, comparatively quiet. In the entire district, close to four and a half million acres are under lease, a very large part of this total being held by major companies on long term leases, pending future development.

"At this writing, there are no prospects in sight of any new prolific oil fields being opened up. However, with the large number of scattered wildcats continually being drilled over this vast territory, located in promising areas and many on good geological structures, it is necessary that this country be constantly watched and all information possible be collected to add to what little is now definitely known about Southwest Texas."

In connection with deeper drilling in the Balcones fault zone division of the general area, Turner referred to the United North & South Oil Co.'s No. 1 Kelley and No. 1 Tiller tests along the northwest side of the Luling field. These wells are drilling, respectively, in schist at 6,865 feet and 6,148 feet. The top of the schist was found at about 4,700 feet and they have been making about 3 feet daily in this formation, using special Reed roller bits and changing the cutters every day.

One core taken recently in the Kelley well, using diamond cutters, cost

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$4,400 to get. The two wells have been drilling for more than two and a half years, the crews working in three shifts most of the time, and the total cost to date is estimated at $700,000.

UNITED NORTH & SOUTH OIL CO., which discovered the Luling field, August 8, 1922, reserved oil rights below the Edwards lime when it sold its producing properties a year ago to Magnolia Petroleum Co. The Luling field has produced, according to Turner's figures, 30,900,000 barrels of 26 A. P. I. gravity oil from 510 wells at average drilling depth of 2,100 feet.

Turner described the principal play for a new field of the Luling type as having been along the fault line northeast of production in Caldwell county, where some 25 dry holes have been drilled. He said in part:

"Since the discovery of the Luling field, approximately two hundred wildcats have been drilled to the Edwards lime along this same strike, extending over an area more than a hundred miles in either direction from Luling, but in no other case has more than the lightest showing been found in this formation, in spite of the fact that several major faults of probably the same magnitude as Luling have been discovered and well tested.

"Next to the Luling field in importance is the Lytton Springs field in the north part of Caldwell county, the unique feature here being that the production is found on a buried igneous plug, the oil having accumulated in a decomposed lava, termed serpentine, which overlies and partially displaces the Austin chalk. This field was discovered by Lefevre & Storey, April 1, 1925, has produced 4,830,000 barrels of 38 gravity oil to date from 330 wells of 1,630 feet average depth, approximately 1,100 acres being productive over a circular area about 1¾ miles in diameter. The peak of production in this field was reached the first of June, 1925, when the production held over 14,000 barrels daily for several days. The present production is 2,300 barrels daily.

"The discovery of this field naturally brought on an extensive search all along the fault zone to find more fields of like nature, the play being generally confined to an area between the major Balcones fault and the faulted zone to the southeast along which the Luling field is located. In this search, the geologists have looked for similar surface features, have dug into the slush pits of practically all the old wells drilled in this area trying to find serpentine cuttings, have made core drill tests, and have used all known types of geophysical instruments. In the course of extensive wildcatting during the past two years, other smaller beds of serpentine have been found, sometimes with light showings, but nothing as yet in the way of a new field is in sight.

"The extreme western part of the Balcones Fault Zone has never had a real active play, although more recently interest in this area has gradually been increasing. A number of deep tests have been drilled, and are now drilling in this area. Of especial interest recently has been the Rycade Oil Corp.'s deep test on the Chittim ranch in Maverick county which, several months ago at a depth of 5515 feet, in a sandy lime formation probably Glenrose, struck a flow of about 9,000,000 cubic feet of wet gas, spraying around 25 barrels daily a clear white distillate of 57.5 gravity. This has been drilled deeper, and now, at 5590 feet, total depth, is making 30,000,000 cubic feet and close to 100 barrels of this fluid, coming up by the tools and drilling line blown up 200 feet off bottom and stuck.

"This test is located near the center of a 250,000 acre block held by the Rycade. This company is also drilling another deep cable tool test, located four and a half miles northwest of this well, on the Sullivan ranch, where they are now reaming to set 9-inch casing at 3632 feet. The west Texas play has recently been extended down into this district, with considerable geological work, leasing, and wildcatting being done in Val Verde county and other counties to the east.

"The production of oil in the Laredo district reached its peak last September, with 18,096 barrels daily average for the month from two wells in the Mirando City, Schott, Wolcott, Mid-Ojuelos, Aviators, Mirando Valley, Henne-Winch-Farris, and Randado pools, all located along the Reynosa escarpment, and extending a distance of forty miles north and south through Webb, Zapata, and Jim Hogg counties. These fields have produced to date a total of close to 13,000,000 barrels since the first discovery five years ago.

"DURING the past year, the principal development has been in the Aviators pool, in Webb county, and the Randado pool, in Jim Hogg county. Present daily production from all fields in the Laredo district is 10,850 barrels, averaging 21 gravity, from 727 wells. During the past year the first pipe line outlets for Mirando crude were constructed, the Humble laying a 110 mile 8-inch line to Ingleside, on the Gulf Coast near Corpus Christi, and the Magnolia laying a 180-mile, 8-inch line to Luling, there connecting with their line to Hull. Previously, this oil was taken out in tank car shipments over the Tex-Mex railroad.

"The largest leasing play started in this district just about a year ago, when a number of the major companies went on a buying spree and took several hundred thousand acres in the way of general protection, principally along the Reynosa escarpment trend, paying generally from $2 to $20 per acre. The Humble, during the first week of their leasing campaign, bought 13,000 acres scattered at a cost of $70,000 and in six weeks time had spent $142,000, the Gulf exceeding this over the same period with an expenditure of $167,000.

"During the past two years $3,000,000 has been spent by the major companies in five counties in this district for wildcat and protection acreage. There are now approximately 1,500,000 acres under lease in the Laredo district, the Magnolia leading with 211,470 acres, the Texas Company second with 123,450, and the Gulf third with 94,162. Everything along and adjacent to the Reynosa escarpment is now leased practically solid for a distance of one hundred and fifty miles.

"THE most sizable deals on absolutely wildcat acreage were made last summer when the Humble and Foster & Reiter leased the Viggo Kohler ranch of 24,000 acres in the southwest part of Duval county, paying $75,000 cash, $240,000 out of one-fourth the first oil or gas produced, and agreeing to drill six 3,000 foot tests. Three of these tests have now been drilled and abandoned, the fourth is showing for a small oil well at a depth of 2700 feet, and they are now drilling the fifth and sixth. This ranch is partially located in the Reynosa escarpment trend, and also is in trend northeast of the Cole field. At about the same time, O. W. Killam, of Laredo, the largest individual Operator in this district, leased the W. O. Billings ranch of 11,000 acres, northeast of the Carolina-Tex field in Webb county, for a consideration of $100,000 cash and $100,000 in deferred payments. Recently Mr. Killam purchased a lease and one-half minerals on some 13,000 acres of the unleased A. M. Bruni land in the southeast corner of Webb county, southwest of the Cole field, for a consideration of $120,000, and then sold the Magnolia 5,000 acres out of this, scattered as protection acreage, at $15 an acre.

Reeser Visits California

LOS ANGELES, June 17. — E. B. Reeser, president, Barnsdall Corp., was in Los Angeles several days last week and intimated that if Barnsdall's California company continued to progress, it was possible a refinery would be built in California within the next two years. He visited the fields his company is interested in with R. A. Broomfield, vice-president in charge of California operations. Barnsdall is selling its California crude on contract to two large companies.

Super Service Stations Under One Roof

By Ward K. Halbert

N. P. N. STAFF WRITER

Super service station of Sweney Gasoline & Oil Co. at Peoria, Ill.

PEORIA, June 18

SWENEY Gasoline & Oil Co., Peoria, has just opened a super service station with automobile laundry, tire repair shop, battery charging station, crankcase service, accessory store and four-pump gasoline station under one roof. G. I. Sweney is head of the company and, as far as he and other company officials know, his is the first adaptation of the California type station to the wintry climate of the Great Lakes region.

A large arched roof covers a 51 by 100 foot building in which the several businesses have separate quarters. Some have special rooms but others are not partitioned off. An oil burner supplies hot air which is forced to all parts of the structure. Automobiles can enter the building from three sides but heavy, glazed, rolling doors may be used to close these passages in bad weather without interfering with the work.

Sweney Gasoline & Oil Co. has complete supervision of operations at the super service station to be sure that its own policies are carried out and that the premises always are clean and attractive but three firms are represented there. A reputable local firm rents and operates the accessory store as a branch of its main establishment. It also operates the battery and tire shop. A man of Sweney's selection owns the automobile laundry, greasing operations and crank case service. The space is so large that a car may be driven from any department to any other with ease.

Building any kind of a station in Peoria is almost a reversal of Sweney policy. Bert Taggert and Paul Sweney, actively in charge of the company's operations, point out that the new station is the company's ninth in the city but the first sizable investment in the business in more than two years. Few companies have been as conservative as Sweney of late because marketing conditions in Peoria have demanded the strictest economy. Peoria has had a continuous price war for more than two years and today has 30 cut price dealers.

MAJOR oil companies have been forced to a subnormal price level in Peoria. The cut price group generally sells 2 cents below them. Especially in the down town and industrial districts gallonage is so divided and margins so small there is little or no profit in selling a competitive U. S. Motor gasoline. After the trouble began Sweney refrained from expanding but carefully analyzed conditions and watched for the right economic move.

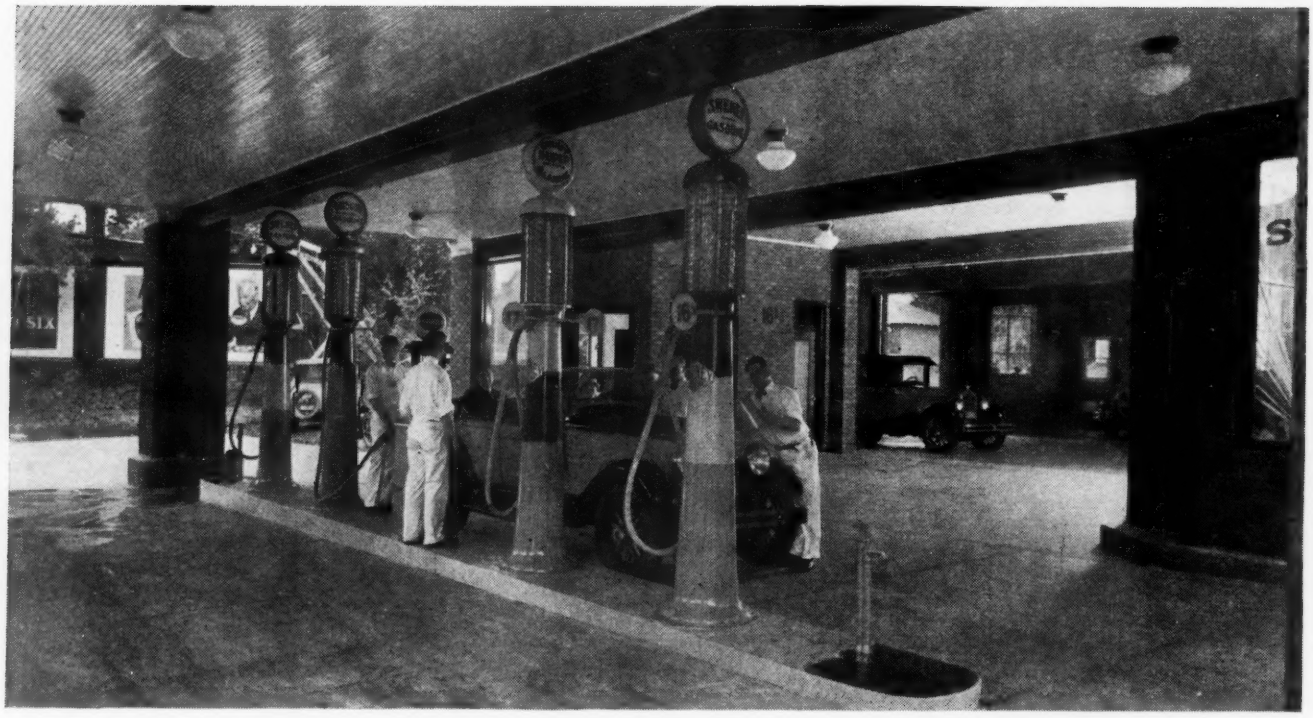
Despite bad competition, Gold Coin, Sweney's premium high-test gasoline has had a good gallonage. It sells for 3 cents a gallon more than competitive grades and averages half the company's volume the year around. It costs more money at the refinery and requires consistent advertising but the demand for it has held up through two years of price war because of its superior quality.

Observation showed Gold Coin's largest demand was in the residence districts. It is a luxury gasoline, not particularly sought after for trucks and industrial motors. Company officials also know that Gold Coin sells best at clean attractive stations where the finest automobile and the nattiest clothes do not look out of place.

Although company officials believed a good station in the residence district would be a good investment, the right location never seemed to be available until this spring. A few weeks ago real estate people heard that the Sweney Gasoline & Oil Co. had come into possession of a lot 100 x 101 feet at Jackson's Corners on the East Bluff. That description of location does not mean much elsewhere but they are eloquent words in Peoria.

Jackson's Corners, now Knoxville and McClure Aves., is an exclusive residential neighborhood, not the richest in town but among the oldest, where real estate is closely held. It has carried that name since it was a favored spot for Peoria folk to catch the Galesburg stage coach on the old Knoxville road. Later it became a well-known spot with a general store and a blacksmith shop. It was a mile and a quarter from town.

IT IS still a well-known spot, but the general store has been supplanted by a drug store and a chain grocery, among other things. The blacksmith shop made room for a garage 10 years ago. The road from Peoria is a beautiful street, but Jackson's Corners is still a separate community of well-to-do people and local pride. Transfer of a lot 100 feet square at Knoxville and McClure Aves., is



Gasoline and motor oil sales department of Sweney Gasoline & Oil Co.'s super service station at Peoria, Ill. The man in the car is G. I. Sweney.

something to tell about town.

So it was with considerable pride that a grand opening day was announced for the new super service station. It was scheduled for Saturday, May 28. Weather was fine and response to advertising was good. The four pumps dispensed 4,600 gallons of gasoline, giving six gallons for the price of five. Actually about 760 gallons were given away and 3,840 sold. Moreover the station sold 1,000 gallons the next day and 870 gallons Memorial Day at regular prices.

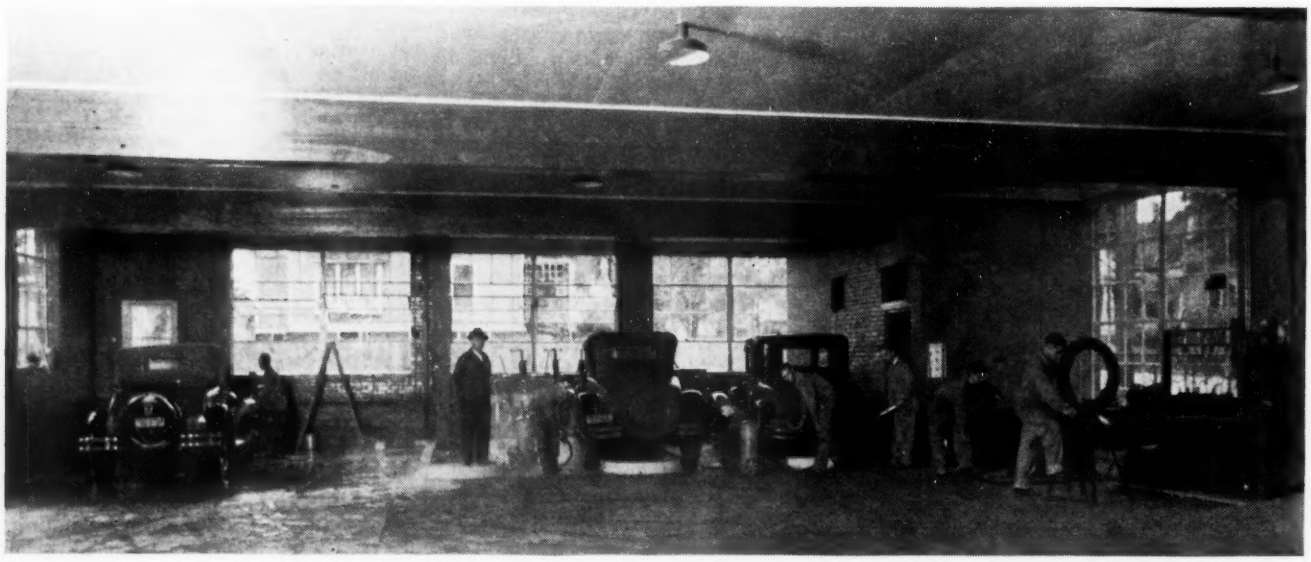
Extra expenses of the opening day were paid for within the first three days. Gasoline margins nearly covered it. The expense items were: newspaper advertising $150; brass band $90; carnations for the ladies $80; free gasoline $76, and toy gas balloons bearing advertising $25; total $421.

Although the opening was elaborate the favors were inexpensive. Sweney officials took care that the crowd came to see the new place, not in the hope of getting something free. It was a day of service demonstrations. One colored washer in the automobile laundry turned out nine cars thoroughly cleaned. The young men in the tire repair department took off a customer's tire, vulcanized the tube and had him on his way in 12 minutes. Receipts in the greasing and crank case department were $112 for the day.

The accompanying ground-floor plan shows the station's layout. The building is 100 x 51 feet and faces Knoxville Ave., which has a car line. McClure Ave. connects the city's park system.

Four pumps are in a row on a concrete island in the middle of the double drive in front. A handsome lube fountain occupies the middle position on the island. This part of the station is under direct management of Sweney Gasoline & Oil Co.

The battery shop, the tire shop and sales department, and the accessory store are under the direction of Hamilton Motor Inn. J. P. Durnin, a former Sweney employe, owns the car washing laundry, the crank case service and the greasing. The oil



One wash rack, greasing and oiling pits, and tire repair department of Sweney Gasoline & Oil Co.'s super service station at Peoria, Ill.

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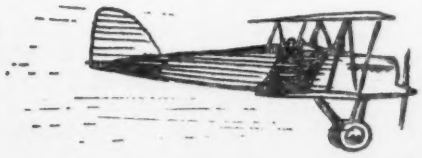

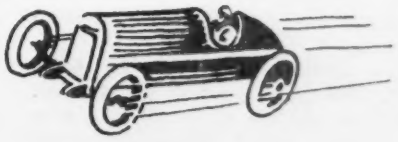

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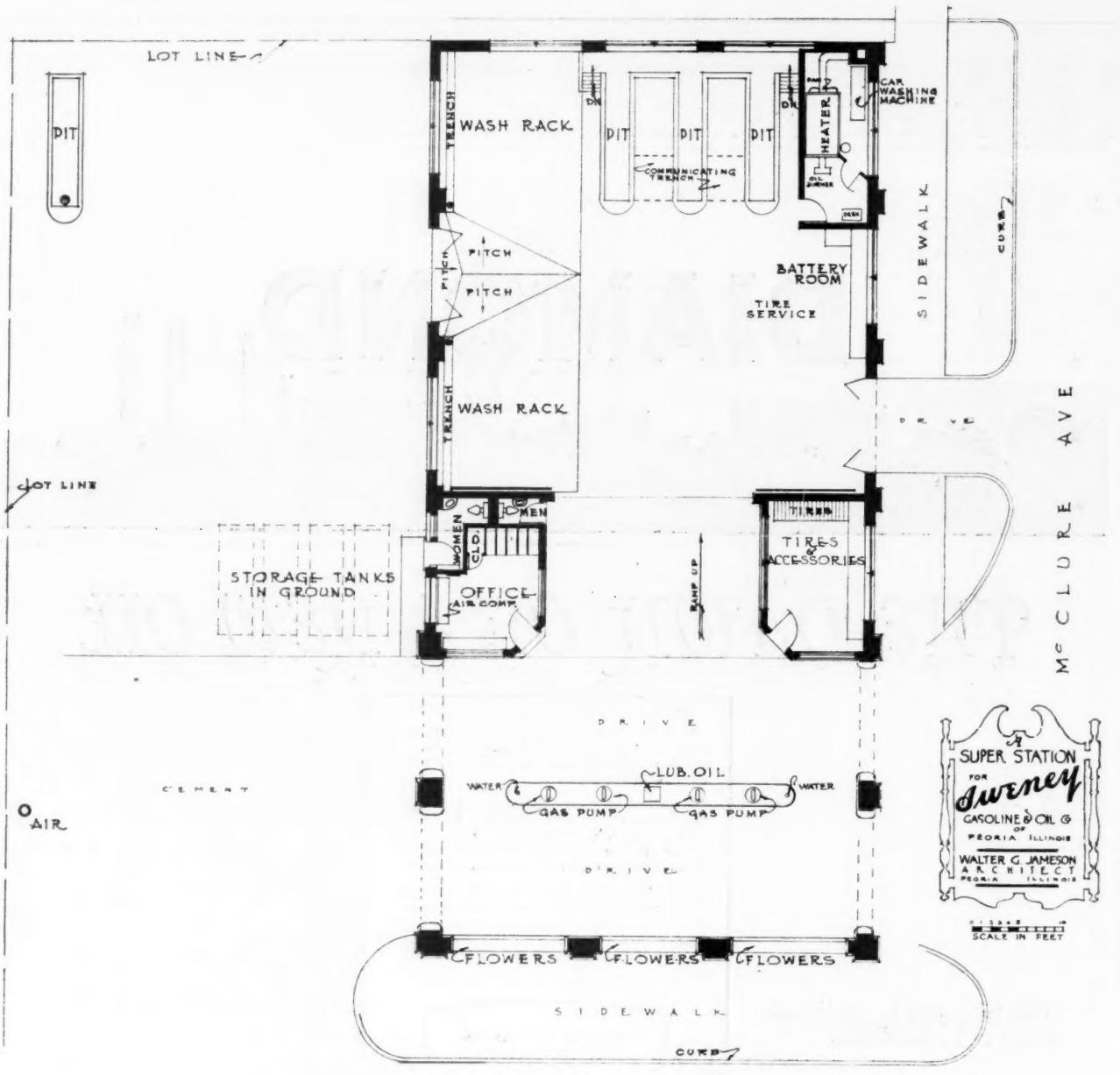
Dubuque
St. Louis



Ground plan of super service station of Sweney Gasoline & Oil Co., Peoria. Six departments managed by three firms in one building which is large enough to turn a car without backing. Drawing by Walter G. Jameson, Peoria

company has general supervision however.

When Sweney took the place over, the present building was on the lot, a spacious garage comparatively new with large metal windows giving plenty of light. The front end was remodeled, walls were removed and room made for drives. The grade was changed and new concrete floors were laid throughout including sidewalks in front. The old overhead trusses were covered to appear like beams and a high plaster ceiling put in to improve appearance.

Coincident with the completion of this station, the company changed its color scheme to green, cream and red, and finished the building accordingly. In the gasoline sales department Sweney works four men, two to each shift, always dressed in white duck pants and white broadcloth shirts. Men in the other departments wear pin-stripe overalls. The washing and lubricating department has three white men and a colored washer. Hamilton employs two men in the accessory store, tire and battery shop.

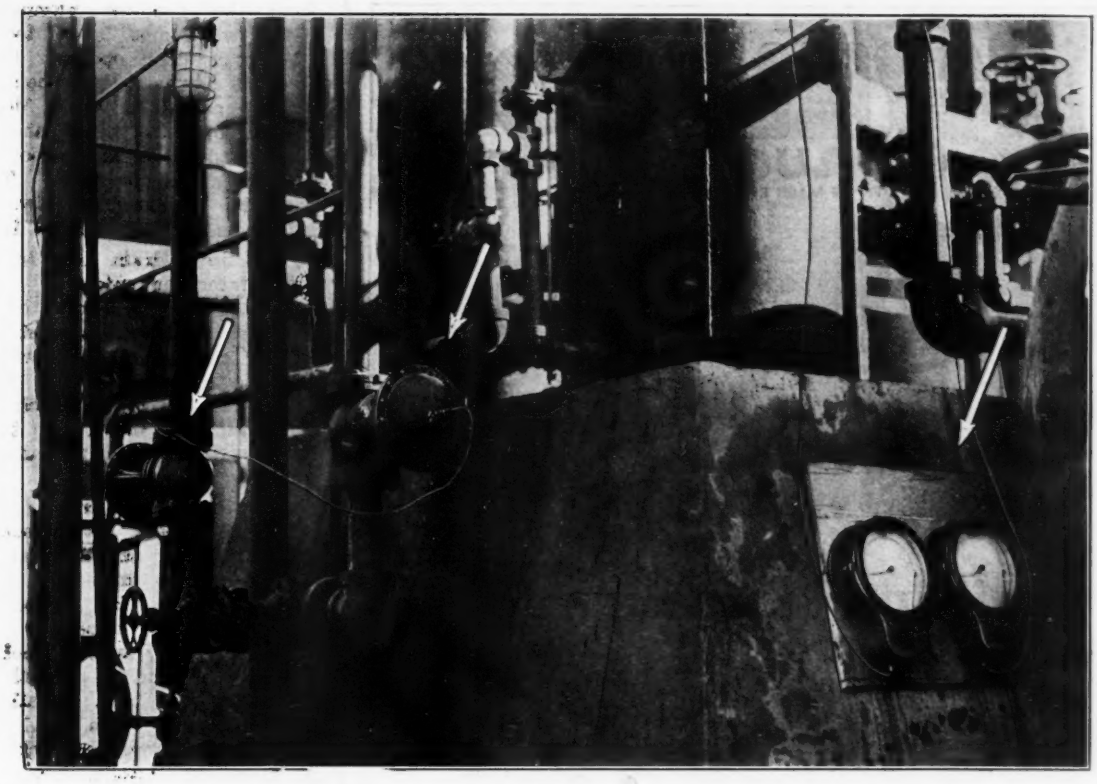
There are flower beds near the edge of the sidewalk and hanging baskets overhead. At the corner of the station is a drinking fountain.

The pumps are easily accessible from either direction. A hydrant for radiator water is at each end of the pump island. These hydrants deliver water from the city mains rapidly and may be used all winter because they cut off below the frost line and drain quickly.

The four pumps dispense three grades of gasoline. U. S. Motor is sold from the two end pumps. The inside pumps sell premium products. One is for Gold Coin, the high test grade and the other for Knockless, which Sweney has sold at a premium of 1 cent for about a year. The electrically lighted fountain in the middle of the island is the source of motor oil sales in quarts. It is connected by underground pipes with motor oil storage in the office.

The two sales rooms are handsomely finished. One is the service station office of Sweney Gasoline & Oil Co. To discourage loitering, it is scantily furnished. It has only one seat and that is a high stool. It has a small built-in desk with a cash drawer, some shelves, six motor oil tanks, an air compressor and a Kewanee safe so placed and painted that it looks like part of the compressor.

The accessory sales room is well stocked and well furnished. A drive-



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The photograph above shows *Tycos* diaphragm valves working in conjunction with *Tycos* Type P temperature regulators, controlling temperatures in knock-out boxes, and *Tycos* recording thermometers recording those temperatures at a large Mid-Continent natural gasoline plant.

This is but one use for *Tycos* temperature instruments in the oil business. There are hundreds of others for in few other industries are the uses of heat so diversified or so important.

Tycos temperature instruments have rendered excellent service for oil operators all over the world. They have been called upon to handle every temperature requirement. It is with confidence, therefore, that we recommend these sturdy, reliable instruments for your refinery.

Our engineers will demonstrate why their uniform results and low upkeep make them worthy of being made the standard in *your* plant.

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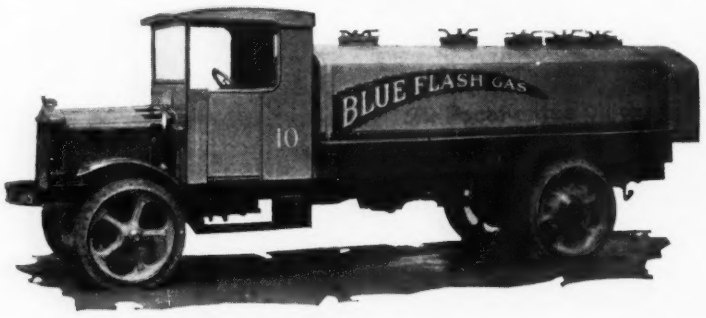
DRAINS LIKE A FUNNEL

WELDCO TRUCK TANKS

TRADE MARK REG. U.S. PAT. OFF.



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BEAUTY is more than "skin deep" in the WELDCO Truck Tank. Years of dependable service have proven the superiority of its custom-built construction. It has scientifically balanced load and includes every feature that insures safety, strength and abundant satisfaction.

THE "WELDCO" FUNNEL DRAIN

This exclusive feature enables WELDCO Truck Tanks to drain completely in any position. Ask for our illustrated literature and we will quote promptly on your exact requirements.

The Youngstown Welding Co.
Welders Since 1912
Youngstown, Ohio

Oil Price Handbook

RECENT crude and tankwagon price changes have caused many an oil man to study prices prevailing a year ago at this time.

What was Mid-Continent crude a year ago today? Or, what was 58-60 U. S. Motor gasoline in Oklahoma? Or, the tankwagon price of gasoline a year ago? These are some of the questions you are asking yourself right now.

You can get the answers most conveniently, rapidly and accurately in the OIL PRICE HANDBOOK for 1926. It contains the refinery, tankwagon, crude prices and export markets for the entire year 1926 as published in the weekly issues of National Petroleum News. 146 pages, cloth bound, marginal index—price $5. Send for your copy *today*.

NATIONAL PETROLEUM NEWS 812 Huron Road Cleveland, Ohio

way to the drain pits and laundry from the gasoline pumps between these two rooms is 25 feet wide.

A large door opening directly on McClure Ave. is adjacent to the battery and tire repair department. Almost opposite it is another wide door, leading to the street over the company's private drive. The latter door is between the two washing platforms of the automobile laundry.

The three drain pits in the back are intercommunicating at both ends. They are built of concrete and behind them, against the wall, is a concrete shelf which holds eight oil drums. These drums are filled through pipes which penetrate the wall, A motor oil tank truck supplies them from the alley outside, dumping through a hose.

A car may be driven around the building. There are streets at one side and end, an alley at the rear and a private drive 50 by 100 feet at one side. This space is available for future expansion. The fill pipes for the buried gasoline tanks are there, and a fourth concrete drain pit has been installed outside for emergency use. All pits are equipped to serve cars with any kind of greasing fittings. Sweney Multi-Use grease guns are used for both rear end and chassis lubrication.

Vulcan Steel Tank New Tulsa Enterprise

TULSA, June 18.—A new Tulsa industry is the Vulcan Steel Tank Corp., engineers and manufacturers of steel plate work. This company announces its Tulsa fabricating plant under construction is nearing completion. The plant is on a five-acre tract on the Frisco right-of-way, just east of the Pure Oil Co. shops and warehouse. The main erection bay will be 55 feet in width, equipped with 15-ton electric crane for handling heavy plate work. A separate section of the plant will be devoted to manufacture of lighter tankage of the welded type.

J. F. McKelvey, for many years at the head of the Pioneer Tank & Boiler Co., is president of the Vulcan Steel Tank Corp., and will give it his personal direction. J. S. Warren, vice-president, continues as secretary and general manager of the Maloney Tank Manufacturing Co. R. B. Millard, of the Southwestern Engineering Corp., manufacturers of gasoline plant and refinery equipment, is one of the directors. Other directors are: N. P. Day, secretary and L. N. McKelvey, sales engineer.

Part of the same building site and the same trackage will be used by the Southwestern Engineering Corp. for its new plant. The two companies also have acquired a tract of land to be developed into home sites for their employes.

Roxana's Wildcat in Logan County, Okla. Shows Better Than Previous Wells

By Lawrence E. Smith
N. P. N. STAFF WRITER

TULSA, June 17.

LOGAN county, central Oklahoma, offers no contribution to the country's production, but the performance of the most recent "discovery" indicates future possibilities. It is to be regarded generally as 6,000-foot territory, that being about the depth to the Wilcox sand, unless future wells should find the shallower sands more prolific producers than past ones have.

The newest one, reported in NATIONAL PETROLEUM NEWS of June 1, is the Roxana Petroleum Corp.'s No. 1 McCully, in the southwest of the northeast of the southeast of 30-19N-4W. over in the northwest part of Logan county. It is about 20 miles south of the center of the Garber field, nearest production. Its status now is that it is 5,911 feet deep, is producing around 250 barrels of 40-gravity oil daily, flowing by heads about once in three hours, makes one million cubic feet of gas daily. The pay which has been drilled a total of 12 feet is the Wilcox and is the second oil producing horizon picked up in this test. The upper one was from 5823 to 5827 feet and showed for about 60 barrels daily.

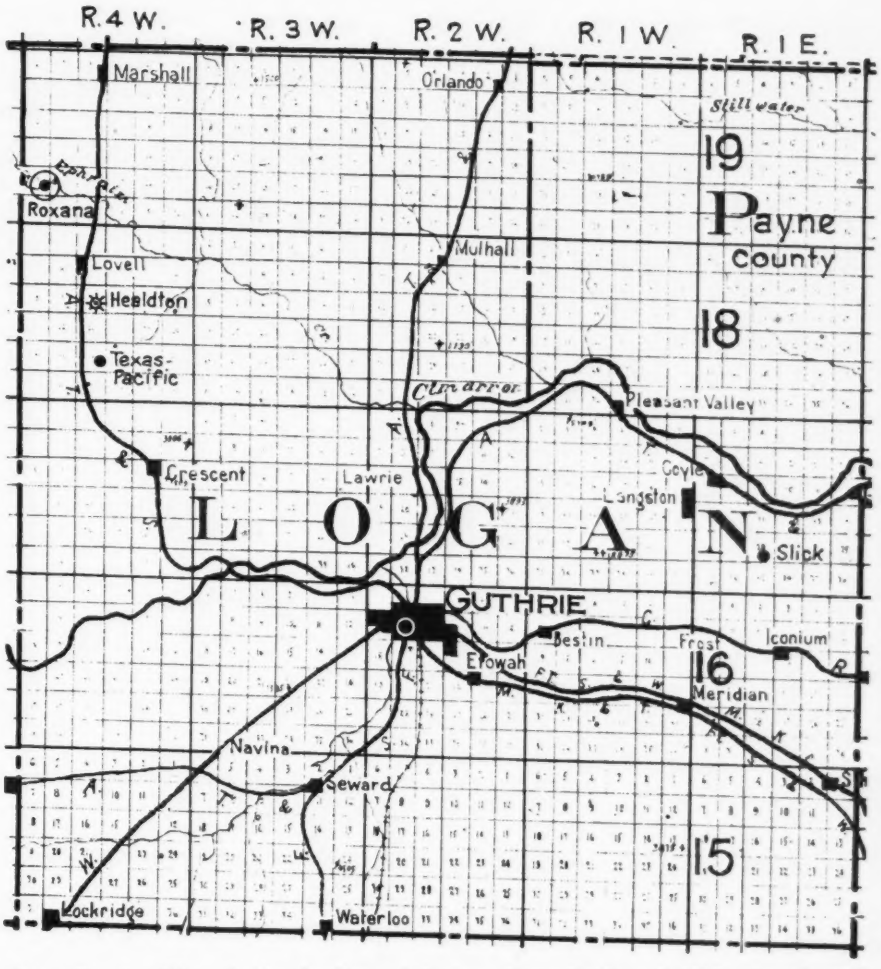
The other Logan county well which has been completed as a producer, although a small one, is the Texas Pacific Coal & Oil Co.'s No. 1 Sy Moore, in the southwest northeast southeast of 28-18N-4W. It got its oil at 4059, and was drilled to 4090 feet. Since it found production about the first of this year it has produced a total of 3,555 barrels. During the first half of May it averaged 23 barrels daily and has been shut down since because of engine and tubing trouble. This pay is somewhere in the Tonkawa series.

THERE are a number of wells drilling in the county, some of them getting fairly deep. They are as follows:

Bryan & Emery, northwest of southeast of 33-19N-4W, drilling at 4300 feet. A showing of oil was reported at a higher level.

Brown & Blevens, southwest of northwest of 9-18N-4W, shut down at 4515. The contract has been completed on this well and it is uncertain whether it will be carried deeper.

Texas Pacific Coal & Oil Co., northwest northeast northwest of 27-18N-4W, drilling at 4050 feet. Expected to find the pay which produces in the same company's Sy Moore well.



Logan County, Okla., showing locations of Roxana, Texas Pacific and Slick oil wells and Healdton gas well.

Texas Pacific Coal & Oil Co., southeast northwest of 33-18N-4W, drilling at 3840 feet.

Haley & Pioneer, southwest southeast of 33-18N-3W, drilling at 2600 feet. Acreage contract.

T. B. Slick, Inc., is drilling below 3500 feet in the northwest of the southeast of 20-17N-1E, in the same vicinity with Slick's No. 1 Berry, in the southwest southeast of 28-17N-1E. The latter well aroused some local excitement last winter when it found some oil in a sand at 4658-61 feet.

WHILE the well was standing with several hundred feet of oil in the hole, Slick put on one of his characteristic leasing plays, inviting anyone who had Logan county acreage to come in and submit it. The well was then deepened, went into water and is now underreaming at 4890 feet.

BLACKFORD Oil & Gas Co. is drilling at around 2,000 feet in the southeast of 26-16N-1W. This is an acreage contract.

Bu-Vi-Bar Oil Co. is down 3492 feet in the center of the southwest of 12-15N-1W.

Carter Oil Co. is below 5000 feet in the southwest of the northeast of the southwest of 32-19N-3W.

Additional to the Texas Pacific and Roxana producing wells, at least 16 wells have been completed in Logan county, most of them failing to go to sufficient depth to be adequate tests. Included in this list is one gas well, that of the Healdton Oil & Gas Co. in the northwest of the southeast of 16-18N-4W. This well was rated at

Log of Roxana's Deepest Well

10	surface clay
34	sand
119	pack sand, little red bed
139	red bed
211	packed sand
301	red bed
421	shale and shells
481	sand
571	red bed
640	blue shale
650	sand
843	shale, little lime
870	red bed
936	shale
947	sand
1046	red bed
1095	red bed—little gyp
1095	SLC
1113	shale
1134	red bed—gypsum
1166	red bed—gypsum
1170	sand
1195	red bed
1240	blue shale with streaks of gyp
1306	blue slate and gyp
1315	blue shale and lime shells
1355	blue shale
1377	brown shale and limeshells
1410	brown shale with streaks of sand
1419	brown shale
1455	blue shale
1470	blue shale—little lime
1494	sandy shale
1505	bkn lime
1515	sandy shale
1532	brown shale little lime
1540	sandy shale
1570	lime bkn
1581	lime sandy
1659	brown shale and limeshells
1661	bkn lime
1670	shale brown
1683	lime
1705	brown shale
1722	bkn lime
1777	brown shale
1794	sandy shale
1810	brown shale
1815	lime
1840	brown shale
1852	lime
1900	brown shale
1914	sandy shale
1923	sand
1929	lime
2045	blue shale
2056	sand
2065	brown shale
2080	sand
2095	blue shale
2109	bkn lime
2128	lime
2148	blue shale
2155	lime
2160	sand
2271	blue shale
2278	lime
2286	lime sandy streaks shale
2364	blue shale
2402	blue shale and limeshells
2454	blue shale
2459	sandy shale
2468	blue shale
2479	sandy shale
2514	blue shale
2517	sandy shale
2533	blue shale
2567	blue shale
2571	lime
2579	blue shale
2584	lime
2632	blue shale
2636	lime
2638	lime
2772	blue shale
2788	lime
2801	bkn lime
2828	blue shale
2831	lime
2885	blue shale
2891	lime
2893	blue shale
2909	lime
2916	lime sandy
2932	bkn lime
2980	blue shale
2983	sandy shale
2988	sand
3010	blue shale
3013	sand
3029	sandy shale
3037	sand
3053	blue shale
3057	sand
3099	sandy shale
3105	shale with streaks of sand
3150	blue shale
3171	sandy shale
3183	sand
3188	blue shale
3199	
3214	sand with streaks of shale
3274	shale with streaks of sand
3318	lime
3365	blue shale
3370	bkn lime
3387	sand and shale
3405	sand
3445	blue shale
3449	sand
3496	blue shale
3567	lime
3594	lime hard
3601	lime
3611	sand
3615	sand hard
3625	sand
3630	red rock
3665	sand
3701	shale
3724	lime
3730	shale
3734	red rock
3738	sand and lime very hard
3743	sand
3746	blue shale and sand
3762	sandy shale
3770	sand
3785	sandy shale
3790	sand
3792	sand
3795	shale
3802	black shale
3816	sand
3838	shale
3954	blue shale
3968	sand
3968	sand
4034	blue shale
4062	blue shale with streaks of hard gray sand
4190	blue shale
4200	sandy shale
4201	blue shale
4203	sand water
4207	shale with streaks of sand
4355	shale
4358	slate hole dry
4371	shale dark
4377	lime gray
4402	shale
4420	shale and shells
4458	shale
4460	shale and shells
4490	shale
4495	lime
4500	slate
4520	shale
4545	sandy shale
4560	gray sand
4565	shale
4575	slate
4580	shale
4590	slate
4506	shale
4617	white sand
4620	shale
4624	slate
4680	shale
4695	sand—top of sand 4680
4748	sand and shale
4764	shale
4770	shale—sandy and limy shale
4785	bkn sand
4812	sandy shale
4840	sandy shale and lime
4844	sandy shale no water
4870	shale
4883	slate
4945	shale
4957	gray shale
4978	shale
5006	shale dark
5008	slate dark
5009	lime gray
5014	slate dark
5025	shale dark
5030	slate
5036	lime
5045	shale
5065	shale and shells
5135	shale dark
5157	slate dark
5170	shale dark
5174	coal
5180	sand
5210	sandy shale
5220	gray lime
5227	dark shale
5256	lime
5260	slate
5262	shale
5288	lime
5291	slate
5293	lime
5302	lime sandy hd.
5322	sandy lime
5345	lime
5350	shale dark and lime shells
5360	lime
5400	shale dark
5405	lime
5425	dark shale
5435	shale
5440	sand hard
5443	shale
5480	dark shale
5488	lime
5494	lime, white hard
5508	lime gray sandy
5515	sandy lime
5531	lime
5534	black shale
5537	lime
5542	shale black
5580	lime
5585	sandy shale
5660	black shale
5666	gray shale
5685	shale
5694	shale
5696	lime
5703	lime
5761	gray shale
5775	shale
5779	lime
5781	lime white hd.
5811	lime
5817	lime
5826	sandy lime
5832	sand
5836	sandy lime and green shale
5843	sandy lime
5852	sand
5874	green shale
5883	lime brown
5891	lime brown
5899	lime and rounded sand grains
5909	sand oil dlg.

CASING RECORD

15½"	154
8¾"	4355
6⅝"	5034

16 million feet daily initial production.

Dry holes in the county are as follows:

Ramsey Brothers in the southwest northwest of 24-15N-3W, 4505 feet.

Oklahoma Drilling Co., southeast southwest of 36-15N-2W, 1716 feet.

Empire Gas & Fuel Co., southeast southeast of 13-15N-1W, 3475 feet.

Magnolia Petroleum Co., northwest northwest of 23-15N-1E, 4080 feet.

A well in the northwest northwest of 30-16N-1E, 2929 feet.

A well in the northeast northeast of 24-16N-1W, 2650 feet.

Zingerie, et al, in the northwest northeast of 5-17N-1W, 5712 feet.

A well in the southeast southeast of 28-17N-1W, 2875 feet.

Mulhall Oil & Gas Co. in the northwest northeast of 9-18N-2W, 2049 feet.

Fox Oil Co. in the northeast southwest of 9-18N-2W, 2535 feet.

Big Star Oil Co. in the northwest southeast of 21-18N-2W, 3500 feet.

Big Star Oil Co. in the southeast southeast of 21-18N-2W, 1730 feet.

A well in the northeast northeast of 4-18N-2W, 1915 feet.

Gilliland Oil Co. in the center of northwest of 5-19N-2W, 3410 feet.

Not much information of a geological nature is available on this territory. Rock exposures are few and the working out of the territory will be almost entirely on sub-surface basis as wells are drilled. The one thing that is fairly well established is that whatever production is found will be deep, that is below 4,000 feet. The one state geological survey publication that devotes any space to Logan county remarks that any wells drilled for oil should be started with the idea of going at least 3500 feet.

This was written about 1916 and the drilling that has since been done in the county, as well as in Garfield and Noble counties to the north, Lincoln and Payne counties to the east and Oklahoma county to the south have shown that considerably more footage is required to reach the possibly paying sands.

A log of the Roxana's deep well, now the deepest producing oil well in the state, is published herewith.

Asks Customers To Invite Friends to Station

JEFFERSONVILLE, O., June 17.—What promises to prove a successful advertising idea, both because of its personal appeal, is the "thank-you" post card being distributed by the Jeffersonville Auto Co. here to motorists who stop at its New White Filling Station on route 70.

The card is a regulation stamped government postal. It serves the twofold purpose of thanking the customer for his patronage and inviting friends of the customer to stop at the station. The customer is asked to sign the card and to mail it to some friend. The card itself is a recommendation of the products and service offered at the station. The fact that it is to be signed by the customer, making him the "go-between" for the company and the friend's business, obviously carries the personal appeal that would be difficult for the company itself to accomplish.

W. W. Williams is secretary-treasurer of the company.

Mason Jars and Milk Bottles to Go if States Adopt Sealers' Plans

By Roger B. Stafford

N. P. N. STAFF WRITER

CLEVELAND, June 17

SPECIFICATIONS governing the design, capacity and tolerances of bottles used in the sale of motor oils, which were tentatively adopted by the Twentieth National Conference on Weights and Measures at Washington recently, will mean the elimination of all mason jars and milk bottles now used extensively, if the specifications are adopted by various states.

Bottle specifications adopted by the national conference are only recommendations to state weights and measures departments and each state may still make its own regulations. Bottle manufacturers favor some national regulation because it would permit them to economize in manufacture by standardizing their products.

The report of the conference's committee on specifications and tolerances for bottles for sale of lubricating oils was published on page 48 of NATIONAL PETROLEUM NEWS for June 8. No deficiency tolerance was provided for bottles but these excess tolerances were embodied in the recommendations: two-quart bottles, 12 drams or 2.7 cubic inches; one-quart bottles, 8 drams or 1.8 cubic inches, and one-pint bottles, 6 drams or 1.4 cubic inches.

Products of leading bottle manufacturers meet the tentative specifications which provide for a marker inside or outside the bottle ¼-inch below the bottom of the metal cap, 3 cubic inches of space between top of oil level and top of bottle, and absence of shoulder or anything that might trap oil.

ONE manufacturer estimated there were a half million bottles in use made especially for handling of motor oils. Another said the number of mason jars and milk bottles in use ran into hundreds of thousands.

Minnesota, Wisconsin, California and Detroit have exacting rules governing oil bottles, one maker pointed out, but there is still variation and confusion because what is good in one state is not good in another.

The bottle specifications are tentative and will not be finally adopted by the national conference until next year. Meanwhile, bottles and dispensing equipment which do not meet the recommended specifications may gradually eliminate themselves through breakage.

Major changes in recommended specifications of gasoline pumps were published on page 28 of NATIONAL PETROLEUM NEWS for June 15. Two minor amendments were made in specifications for meter dispensers. The amended section, with changes in italics, follows:

"Normal speed of operation" shall be construed to mean that range of operating speeds which may reasonably be employed in ordinary commercial usage; in the case of meters used for the purpose of determining the quantity of liquid delivered to an individual purchaser, this shall mean operation within the limits of the discharge rates customarily specified by the manufacturer for the particular type of meter under test, *and all such meters shall be legibly marked to show their maximum discharge rates under normal conditions of installation and the minimum discharge rates and the maximum working pressures for which they are intended to be used*: Provided, however, that the maximum and minimum discharge rates so marked shall be in the ratio of at least 4 to 1, *and in the case of a meter installed for use in the dispensing of liquid at retail the maximum value of the minimum rate shall be 5 gallons per minute.*"

THE first change in the foregoing section is plainly evident. The wording of the second is not so clear. It was the intention of the conference, said a man who attended it, to provide that the slowest rate of discharge through a meter should not be more than five gallons a minute. Should this minimum rate be five gallons, then the maximum rate should be at least four times that, or 20 gallons a minute. Should the minimum rate be four gallons a minute, then the maximum rate should be at least 16 gallons a minute.

A. V. Hoenig Visits Mid-Continent

TULSA—Arthur V. Hoenig, former vice-president of the Carter Oil Co., is spending several days in the Mid-Continent territory. Mr. Hoenig ended his connection with the Hope Natural Gas Co. this year, to which company he had gone when the Eastern properties of the Carter were placed under the management of the Hope, both companies being subsidiaries of the Standard of New Jersey. Upon the termination of his service with the Hope, Mr. Hoenig became an individual operator, taking over by purchase the Kentucky properties which formerly had belonged to the Carter.

"EVERLASTING" Pump Globes

Colors Fired into Glass

Read Our Message—
Let It Be Your Guide—
and You Will Save Money

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AFTER careful inspection and comparison of PumpGlobes manufactured in various parts of the country, we are prepared to state and prove beyond the slightest doubt that our "Everlasting" pump globes with colors fired in, for contour of glass, uniform convexing and perfect annealing, solidity of colors and background, attractiveness, advertising value, durability, workmanship and quality of materials are unexcelled anywhere by anyone and that our prices for this unbeatable product are lower than you are paying for old method short life globes or inferior fired-in globes.

The foregoing may seem boastful—but it isn't—every word is true, and we will prove it if you will afford us the opportunity. Let us send samples and quote prices. Then you be the judge.

REASONS WHY WE CAN SELL THE BEST AT THE LOWEST PRICE:

FIRST, Our Company is controlled and operated by Father and two sons, each one deeply interested and always striving to produce the best at lowest cost;

SECOND, Our close proximity to source of supply of raw materials, all produced within hauling distance of our factory;

THIRD, Our low overhead and sales expense;

FOURTH, Our discovery and perfection of a very simple and economical method of applying ceramic colors and burning them into the glass.

Allow us to show you.

IF SOME DAY—WHY NOT TODAY?

HULL SIGN & MFG. COMPANY
400 E. North Ave.
Pittsburgh, Pa.

"Kwik-Flo"
"Fast-Flo"
"Max-Flo"

FAUCETS!
FAUCETS!
FAUCETS!
FAUCETS!
FAUCETS!
FAUCETS!

"Push-Pul"
"Skrew"
"Rench"

STEEL DRUM ACCESSORIES CORP.

BUFFALO, NEW YORK

"The Girl who was Brown Sugar—"

"VERY sweet, but unrefined"—has her counterpart in the oil business. For there is a lot of oil that, while it is "oily" enough it has not been properly refined. Since the modern world demands that oil have other properties besides oiliness, it is up to us, who have an inherently "oily" oil; to supply them. That's where our Sharples super-refining process comes in. It purifies the oil to a degree hitherto impossible by old-fashioned methods, so that we now offer not only an oil that is as oily as any, but one that is absolutely pure and completely refined.

Let us demonstrate to you the purity of Penn-Empire with a sample. A carload order of Penn-Empire is practically certain to follow.

EMPIRE OIL WORKS, Inc.,
Oil City, Pa.

Tractor Oils
Motor Oils
Industrial Oils

EMPIRE OIL WORKS INC. OIL CITY, PA.
PENN EMPIRE
100% PURE PENNSYLVANIA OIL

Kerosene
Gasoline
Petroleum

When you buy Penn-Empire you get the best.

Atlantic Gets Claims From Government

WASHINGTON, June 13.—The United States Court of Claims has given judgment in Atlantic Gulf Oil Corp. vs. The United States, for the oil company for $1,779,922.44 because the United States Shipping Board, in 1921 failed to take the amounts of crude and fuel oil it had contracted to take from the oil company. It contracted to take 9,000,000 barrels of crude and 6,000,000 barrels of fuel oil at $1.25 per barrel, delivery to be at Tecomate, Mex., or other points to be agreed upon.

When the slump in shipping came in the fall of 1920 the shipping board's oil requirements fell off sharply. By May, 1921, the requirements were away down. On May 18, the board notified the Atlantic Gulf that it would take no more of either kind of oil. Notwithstanding that notice, however, it took deliveries after the notice of discontinuance.

The total amount taken under the contract was 5,659,252 barrels of crude and 517,528 barrels of fuel oil. The Atlantic Gulf, in accordance with the contract, fulfilled prior obligation amounting to 3,022,339 barrels.

The court found that, notwithstanding the pinching out of the Atlantic Gulf's production in Mexico it could have delivered, on the contract in volume great enough to warrant it in giving judgment in the amount before mentioned. The contract was of such a character that in terms the shipping board was obligated to take what the company could deliver, not exceeding the amounts mentioned. In other words it was a contract for specific amounts and the government did not have the right to cancel its orders as shown in the contract, hence the obligation to pay the amount set forth.

The government probably will take an appeal to the Supreme Court of the United States.

Weller Again President of S. O Louisiana

HOUSTON, June 17.—Dan R. Weller, director of the Standard Oil Co. of New Jersey, has been elected president of the Standard Oil Co. of Louisiana, to fill the vacancy caused by the death of C. K. Clarke. Mr. Weller was president of the Standard of Louisiana before he was elected to the directorate of the parent company about a year and a half ago. Mr. Clarke died in March.

SILER CITY, N. C.—Chatham Oil Co. has recently been organized for wholesale distribution of Gulf Refining Co.'s products.

Bureau of Mines Has Developed Method To Find Refining Value of Crude

By N. A. C. Smith

Superintendent Bureau of Mines Experiment Station, Bartlesville, Okla.

Part 2

THE foregoing rules (published in Part 1, page 51 and reprinted herewith) can best be understood by applying them to specific analyses. In Table 3 the data necessary for calculating the "approximate summary" of each of the four typical crude oils, A, B, C, and D are presented in two sections:

1—Data for calculating light products.

2—Data for plotting curves.

It will be noted that temperatures, percentages, specific gravities, and viscosities are taken directly from the analyses themselves. "Weight equivalents," "sum percentages," and "midpoints of fractions," are calculated from the laboratory data as will be explained in detail.

As the strict application of the rules depends to some extent on the nature of the crude oil under consideration, each of the four samples will be considered separately.

RULE 1. In the case of sample A, the application of Rule 1 is very simple, as only two fractions were obtained below 100°C (212°F.). These fractions were so small that the analyst mixed them and actually determined the specific gravity of the mixture. Thus the sum of the two fractions is the percentage of "light gasoline" and the gravity as reported in the analysis is the gravity of the light gasoline shown in the approximate summary.

Rule 2. The application of Rule 2 is somewhat more complex. The percentages and specific gravities of the fractions boiling below 200°C (392°F.) are first tabulated as shown in Table 3. The first two fractions are the same as reported under "light gasoline" thus the first gravity given (0.700) applied to the first five per cent of the distillate. To calculate the specific gravity of a hypothetical mixture such as the "total gasoline and naptha" shown in the summary it is necessary to take into consideration the actual percentages as well as the gravities of the component fractions. This is evident if it be assumed that the volume percentage of each fraction represents its volume in cubic centimeters, as would be the case if 100 c. c. of crude oil were used as the "charge" in the distillation. The volume of the "total gasoline and naptha" is obtained by adding the volumes of the fractions. The "weight equivalent" of each fraction, that is, the weight in grams equivalent to the volume, is calculated by multiplying the volume by the specific gravity of the fraction. The sum of the weight equivalents is the weight of the total "gasoline and naptha." Dividing this weight by the total volume gives the specific gravity of the "gasoline and naptha."

As stated above, the first five per cent of sample A has a specific gravity of 0.700. Thus if percentage represents cubic centimeters, the first 5 c. c. would of course weight 3.50 grams. In the same way the next 8.8 c. c. with a specific gravity of .728 would weigh 6.41 grams. Continuing in this way through the entire range of the gasoline and naptha fractions we find a total volume of 35.8 c. c. with a weight equivalent of 26.64 grams, and dividing 26.64 by 35.8 gives for the mixture an equivalent specific gravity of 0.744.

It is recognized that this calculation is possibly somewhat in error due to the mutual solubility of the various fractions and the contraction of volume in mixing them. In other words, if a total fraction of 35.8 per cent had been distilled from the crude, its specific gravity would probably have been slightly heavier than the gravity as stated. The error, however, is not believed to be serious.

RULE 3. The same method of calculation is used for arriving at the percentage of kerosene distillate and its gravity. By definition, paraffin-base crudes contain no fractions boiling at atmospheric pressure below 275°C (527°F.) that have specific gravities heavier than 0.825, (40° A.P.I.), consequently it can be assumed that everything boiling below 200°C (392°F.) is gasoline or naptha and everything boiling between 200°C (392°F.) and 275°C (527°F.) is kerosene distillate.

Rules 4. and 5. In studying paraffin-base crudes it is most convenient to consider Rules 4 and 5 at the same time, as they both apply exclusively to the "vacuum" fractions. In some of the early analyses published by the bureau a system was adopted of grouping the vacuum fractions on

Rules for Calculating Products in Crude

1. The (sum) total percentage of all fractions distilling at atmospheric pressure below 100° C. (212° F.) is reported as the percentage of *light gasoline.* This figure approximates the yield of gasoline with a maximum boiling point of 125° C (257° F.).

2. The (sum) total percentage of all fractions distilling at atmospheric pressure below 200° C. (392° F.) is reported as the total percentage of *gasoline and naphtha* if no fraction in this range has a gravity heavier than 0.825 (40.0° A. P. I.). This figure approximates the yield of gasoline or naphtha with a maximum boiling point of 215° C (419° F.). (If fractions boiling below 200° C. have gravities heavier than 0.825 they are classed as *gas oil.*)

3. The (sum) total percentage of all fractions distilling at atmospheric pressure above 200° C. (392° F.) but below 275° C. (527° F.) that have gravities of 0.825 (40.0° A. P. I.) or lighter, is reported as *kerosene distillate.*

4. The (sum) total percentage of all fractions distilling at atmospheric pressure below 275° C. (527° F.) *that have gravities heavier than* 0.825 (40° *A. P. I.*) plus all vacuum distillate with a viscosity less than 50 seconds (Saybolt Universal at 100° F.) is reported as *gas oil.*

5. Lubricating distillates are classified as follows: Distillate with a viscosity range (Saybolt Universal at 100° F.) between 50 seconds and 100 seconds, is reported as *nonviscous lubricating distillate.* Distillate with viscosity between 100 seconds and 200 seconds is reported as *medium lubricating distillate.* Distillate with viscosity above 200 is reported as *viscous lubricating distillate.* The percentages of the lubricating distillates are calculated by plotting the gravities and viscosities of the individual fractions separately against "volume sum percentages," and noting where the 50 second, 100 second, and 200 second points on the viscosity curve, intercept the "volume sum percentage" coordinate. The gravities corresponding to these intercepts give the gravity ranges of the distillates.

the basis of their average viscosities. In this system the first two vacuum fractions of Sample A which have viscosities below 50 seconds would be added together and called "gas-oil." The next two fractions with viscosities between 50 and 100 seconds would be added together as "nonviscous lubricating distillate." The last fraction would be considered as "medium lubricating distillate."

The objection to such a plan is seen in oils which have fractions with viscosities close to 50 or close to 100 seconds. For instance it would easily be possible for two samples of oil from the same well to vary enough for one to show a certain fraction with a viscosity of 49 seconds and for the other to show the equivalent fraction with a viscosity of 51 seconds. According to the old system of classification, the entire fraction in one case would be classed as "gas-oil" and in the other case as "nonviscous lubricating distillate," thus giving the impression that the two samples were radically different.

THE viscosity of a fraction as reported in the analysis is the viscosity of the fraction as a whole; but each fraction is, in reality, a mixture of less viscous and more viscous material. In analysis A, Table 1, the first vacuum fraction has a viscosity lower than 30 seconds and therefore is all gas-oil. The second fraction however with a viscosity of 37 seconds might contain some nonviscous lubricating distillate. The third fraction with a viscosity of 57 seconds probably contains a little gas-oil but is mainly nonviscous lubricating distillate. The fourth fraction (viscosity 76 seconds) is probably all nonviscous distillate, and the fifth (viscosity 110 seconds) is a mixture of nonviscous and medium distillates.

THE writer, while convinced that the older system of classification is defective, has not been able to devise one that is adequate. Of several systems that have been tried the one described below is believed to be the best. No matter what system is used, an error is introduced by the mutual solubility of the various constituents of the oil, and differences in the laboratory conditions cause errors in the vacuum distillation itself. The analysis of crude oil by vacuum distillation is at best only an approximation to the truth; therefore, it is believed that the following method of calculation, although arbitrary, is fully as accurate as the precision of the laboratory data warrants.

In this method the actual percentages of the lubricating distillates are determined by plotting a "sum-percentage" viscosity curve. The data for such curves are given in Table 3. In the first two columns the temperatures and the percentages of the individual fractions as stated by the analyst are presented, in the third the successive "sum percentages." The first "sum percentage" is, of course, the volume of the first vacuum fraction, the second is the volume of the first two fractions, the third of the first three, etc. The "mid-point" (on the "sum percentage" basis) of each fraction is stated in the fourth column. In Sample A the first vacuum fraction has a volume of 4.9 per cent and its "mid-point" is obviously 2.45 per cent. The second fraction with a volume of 5.7 per cent has a "mid-point" of 2.85 per cent plus the total of the first fraction (4.9%). In other words, in plotting the curve, the mid-point of the second fraction would be on the 7.75 per cent co-ordinate. In the same way the mid-point of the third fraction (volume 5.8 per cent) would be 2.90 per cent plus the sum of the first two fractions (10.6 per cent), or 13.50 per cent.

The fifth, sixth, and seventh columns give the specific gravities, viscosities and Fahrenheit temperatures as stated by the analyst.

FROM these data the curves in Figures 3, 4, 5, and 6 are drawn, the lower one showing the viscosities

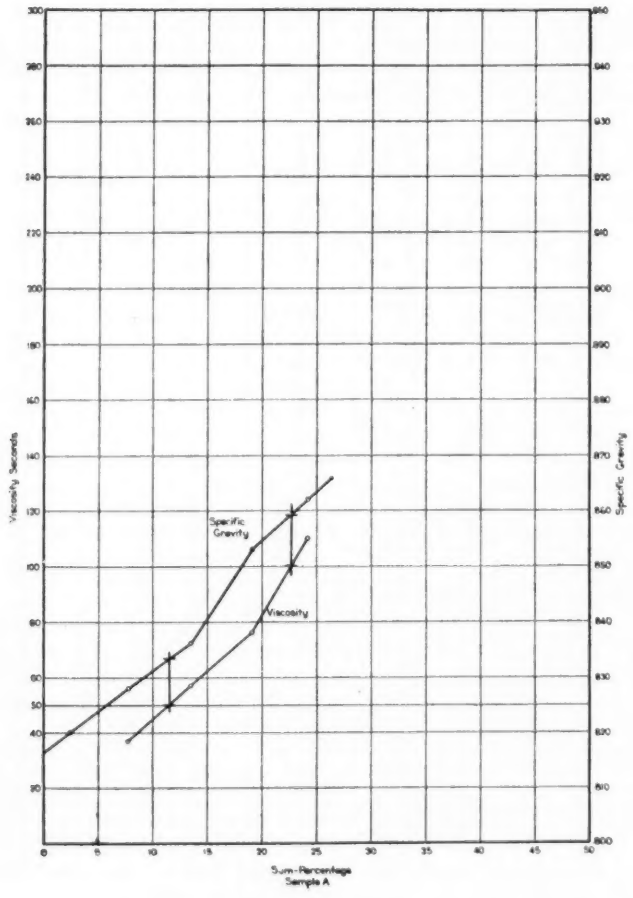

FIGURE 3

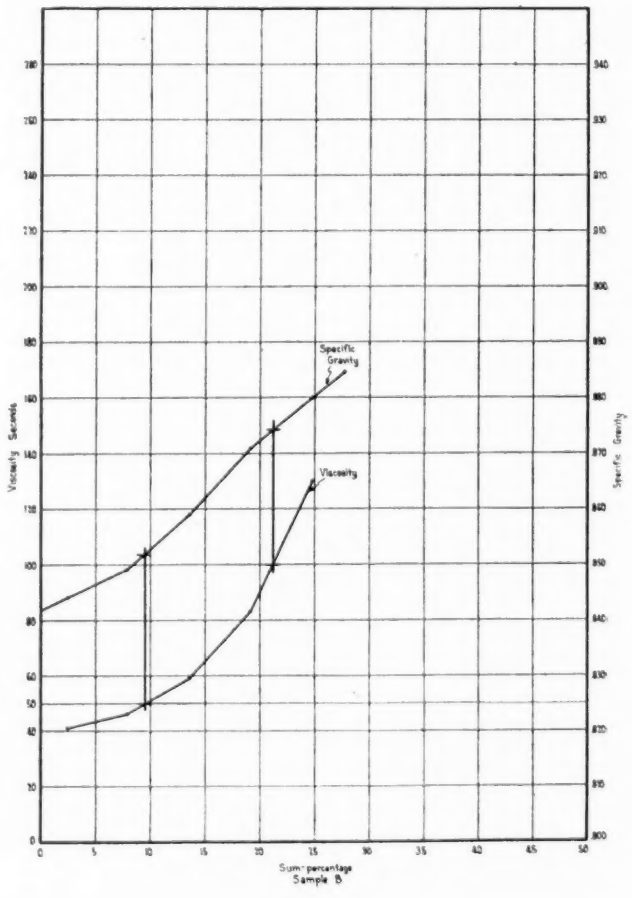

FIGURE 4

and the upper the specific gravities plotted against the mid-points of the fractions. No attempt is made to draw "smooth" curves, the points being connected by straight lines. "Gas-oil" is arbitrarily taken to be the percentage corresponding to the point where the viscosity curve, so drawn, cuts the 50-second viscosity co-ordinate. "Nonviscous lubricating distillate" is the percentage between this point and the point where the viscosity curve cuts the 100-second viscosity co-ordinate. "Medium lubricating distillate" is the percentage between the 100 and 200 second points and "Viscous lubricating distillate," (if it exists) the percentage above the 200 second point.

In Figure 3 the viscosity curve cuts the 50-second co-ordinate at 11.6 per cent. Consequently, this crude is considered to contain 11.6 per cent of gas oil. The specific gravity of the gas oil is taken from the specific gravity curve at the mid point (5.8 per cent) of the gas oil fraction. This corresponds to a specific gravity, as shown by the curve, of 0.825 (40.0° A. P. I.). The viscosity curve cuts the 100-second co-ordinate at 23.6 per cent. In other words there is 23.6 minus 11.6 or 12.0 per cent of "nonviscous lubricating distillate." The specific gravities at the 50 and 100-second points are taken as the gravity limits of the nonviscous lubricating distillate. In this case they are 0.833 and 0.859, respectively, corresponding to 38.4° and 33.2° A.P.I. The "medium lubricating distillate" in the same way amounts to 3.0 per cent and its gravity range is 0.859 to 0.866 (33.2 to 32.9° A.P.I.). It is obvious that no lubricating distillate with a viscosity above 200 seconds is shown in the vacuum distillation analysis. Any viscous lubricating oil in the crude is so high boiling that it is included in the percentage of residuum.

Sample B

THE APPLICATION of the calculation rules to sample B is very much like their application to sample A. The percentages of "light gasoline," of "total gasoline and naptha" and of "kerosene distillate" are calculated as indicated under the application of rule 2 to sample A. It should be noted, however, that the last fraction distilling at atmospheric pressure has a gravity of 0.836 (37.8° A.P.I.), consequently, it is included in the gas-oil percentage. The viscosity and specific-gravity curves (See Figure 4) are drawn in the same manner as for sample A (Figure 3) and the percentages of "nonviscous" and 'medium lubricating distillate" are calculated in the same way. As shown in Table 3 the "heavy gas-oil," that is the gas-oil figured from the vacuum distillation surves, figure 4, is combined with the "light gas-oil" boiling between 250 and 275°C.

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(482 and 527°F.) at atmospheric pressure. The same method of combination is used as in other cases, giving for sample B a total of 15.4 per cent of gas-oil with a specific gravity of 0.843 (37.4° A.P.I.).

Sample C

THE APPLICATION of the calculation rules to Sample C is fairly simple. All of the distillates from this crude have gravities heavier than 0.825 (40° A.P.I.) consequently there is no gasoline, naptha or kerosene distillate in this crude. Therefore, in calculating the approximate summary the first step is to draw viscosity and specific gravity curves, and then calculate the percentages of lubricating distillates and of heavy gas oil. This latter figure is, of course, combined with the percentages of the three fractions boiling at atmospheric pressure to give a total of 31.5 per cent of gas-oil with a specific gravity of 0.871 (31.0° A.P.I.).

Sample D

SAMPLE D also contains no light fractions and is calculated exactly as in the case of Sample C. It will be noted that the last vacuum fraction is reported by the analyst to have a viscosity "above 400 seconds Saybolt," the actual viscosity not being stated. This method of reporting is due to the inherent limitations of the apparatus used in the laboratory. As stated in Bulletin 2073, these viscosities are determined by means of special glass pipettes. At viscosities above 400 the drainage error of the pipettes becomes so large that it is impossible to use them for precise measurements. It is not necessary to include this fraction in the viscosity curve for purposes of calculation as the "cutting point" between "medium" and "viscous lubricating distillate" is given by the third and fourth fractions. If it is desired to extend the curve it can be assumed that the viscosity of the

Table 2

Characteristics of Typical Crudes

Base	Gravity of Key Fraction No. 1	Pour Point of Key Fraction No. 2	Viscosity of Lubricating Distillates
Paraffin	40.0° A. P. I. or lighter	Above 5° F.	Low
Intermediate	33.1° to 39.9° A. P. I.	Above 5° F.	Medium
Hybrid	33.0° A. P. I. or heavier	Above 5° F.	Fairly high
Naphthene	33.0° A. P. I. or heavier	Below 5° F.	Very high

Table 3

Calculation Sheets

Sample A—Paraffin Base Crude

Data for calculating light products.

Distillation at atmospheric pressure.

Temperature ° C	Per Cent	Sp. Gr.	Weight Equivalent	Temperature ° F
Up to 50	.....	.....	.....	Up to 122
50 to 75	1.2	.....	.....	122 to 167
75 to 100	3.8	0.700	3.50	167 to 212
Light Gasoline	5.0	0.700	3.50	
Up to 50	.....	.....	.....	Up to 122
50 to 75	1.2	.....	.....	122 to 167
75 to 100	3.8	0.700	3.50	167 to 212
100 to 125	8.8	0.728	6.41	212 to 257
125 to 150	7.9	0.747	5.90	257 to 302
150 to 175	7.7	0.765	5.89	302 to 347
175 to 200	6.4	0.772	4.94	347 to 392
Total Gasoline and Naphtha	35.8	0.744	26.64	
200 to 225	7.9	0.785	6.20	392 to 437
225 to 250	5.9	0.796	4.70	437 to 482
250 to 275	7.0	0.806	5.64	482 to 527
Kerosene Distillate	20.8	0.795	16.54	

Data for plotting curves in Figure 3.

Vacuum distillation at 40 mm. pressure.

Temperature ° C	Per cent	Sum Per Cent	Mid-Point of Fraction	Sp. Gr.	Viscosity	Temperature ° F
Up to 200	4.9	4.9	2.45	0.820	....	Up to 392
200 to 225	5.7	10.6	7.75	0.828	37	392 to 437
225 to 250	5.8	16.4	13.50	0.836	57	437 to 482
250 to 275	5.4	21.8	19.10	0.853	76	482 to 527
275 to 300	4.8	26.6	24.20	0.862	110	527 to 572

Sample B—Intermediate Base Crude

Data for calculating light products.

Distillation at atmospheric pressure.

Temperature ° C	Per Cent	Sp. Gr.	Weight Equivalent	Temperature ° F
Up to 50	1.8	.....	.....	Up to 122
50 to 75	1.7	0.667	2.33	122 to 167
75 to 100	4.7	0.718	3.38	167 to 212
Light Gasoline	8.2	0.696	5.71	
Up to 50	1.8	.....	.....	Up to 122
50 to 75	1.7	0.667	2.33	122 to 167
75 to 100	4.7	0.718	3.38	167 to 212
100 to 125	6.2	0.746	4.63	212 to 257
125 to 150	5.3	0.767	4.06	257 to 302
150 to 175	5.5	0.785	4.32	302 to 347
175 to 200	4.1	0.798	3.27	347 to 392
Total Gasoline and Naphtha	29.3	0.750	21.99	
200 to 225	4.6	0.810	3.73	392 to 437
225 to 250	5.3	0.823	4.36	437 to 482
Kerosene Distillate	9.9	0.817	8.09	
250 to 275	5.8	0.836	4.85	482 to 527
Heavy Gas Oil*	9.6	0.846	8.12	....
Total Gas Oil	15.4	0.843	12.97	

*From vacuum distillation.

Data for plotting curves in figure 4.

Vacuum distillation at 40 mm. pressure.

Temperature ° C	Per cent	Sum Per Cent	Mid-Point of Fraction	Sp. Gr.	Viscosity	Temperature ° F
Up to 200	4.9	4.9	2.45	0.844	41	Up to 392
200 to 225	5.9	10.8	7.85	0.849	46	392 to 437
225 to 250	5.6	16.4	13.60	0.859	59	437 to 482
250 to 275	5.5	21.9	19.15	0.871	83	482 to 527
275 to 300	5.8	27.7	24.80	0.880	130	527 to 572

Sample C—Hybrid Base Crude

Data for calculating light products.

Distillation at atmospheric pressure.

Temperature ° C	Per Cent	Sp. Gr.	Weight Equivalent	Temperature ° F
200 to 225	7.7	0.845	6.51	392 to 437
225 to 250	6.8	0.867	5.90	437 to 482
250 to 275	10.0	0.878	8.78	482 to 527
Heavy Gas Oil*	7.0	0.894	6.26	.....
Total Gas Oil	31.5	0.871	27.45	.....

*From vacuum distillation.

Data for plotting curves in figure 5.

Vacuum distillation at 40 mm. pressure.

Temperature ° C	Per cent	Sum Per Cent	Mid-Point of Fraction	Sp. Gr.	Viscosity	Temperature ° F
Up to 200	6.6	6.6	3.30	0.894	45	Up to 392
200 to 225	9.4	16.0	11.30	0.900	56	392 to 437
225 to 250	8.3	24.3	20.15	0.910	92	437 to 482
250 to 275	8.5	32.8	28.55	0.924	180	482 to 527
275 to 300	5.9	38.7	35.75	0.928	350	527 to 572

Sample D—Naphthene Base Crude

Data for calculating light products.

Distillation at atmospheric pressure.

Temperature ° C	Per Cent	Sp. Gr.	Weight Equivalent	Temperature ° F
175 to 200	3.0	0.849	2.55	347 to 392
200 to 225	6.8	0.869	5.91	392 to 437
225 to 250	9.2	0.883	8.12	437 to 482
250 to 275	11.9	0.895	10.65	482 to 527
Heavy Gas Oil*	5.6	0.911	5.10	.....
Total Gas Oil	36.5	0.886	32.33	.....

*From vacuum distillation.

Data for plotting curves in figure 6.

Vacuum distillation at 40 mm. pressure.

Temperature ° C	Per cent	Sum Per Cent	Mid-Point of Fraction	Sp. Gr.	Viscosity	Temperature ° F
Up to 200	9.1	9.1	4.55	0.913	48	Up to 392
200 to 225	9.5	18.6	13.85	0.923	65	392 to 437
225 to 250	8.0	26.6	22.60	0.935	110	437 to 482
250 to 275	8.5	35.1	30.85	0.940	220	482 to 527
275 to 300	8.3	43.4	39.25	0.945	440	527 to 572

Reports of Investigations, Bureau of Mines, Department of Commerce.

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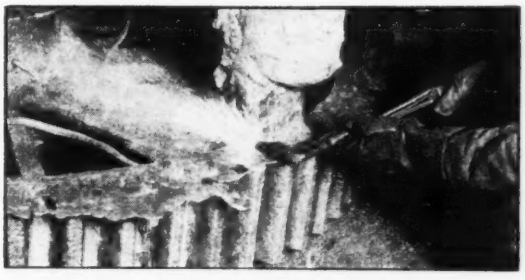

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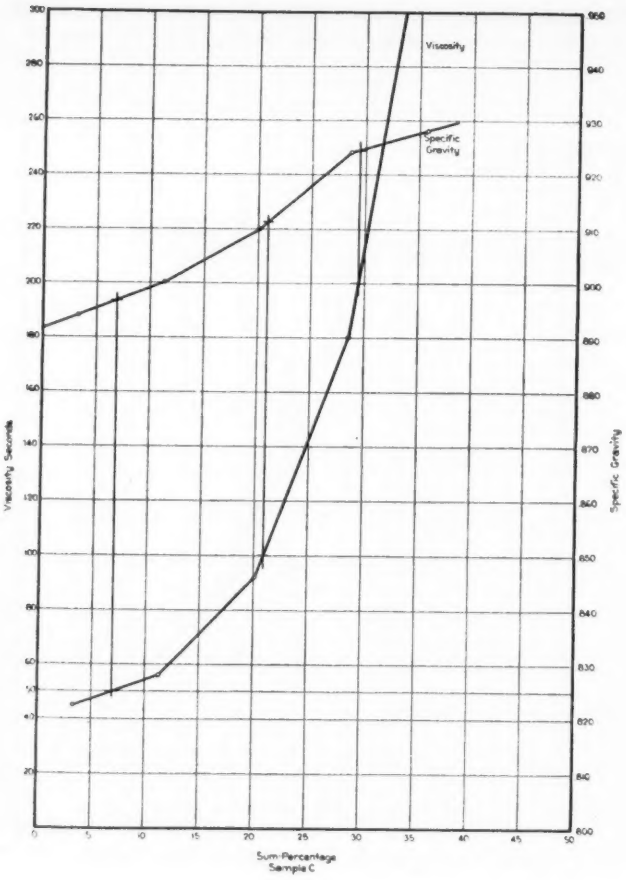

FIGURE 5

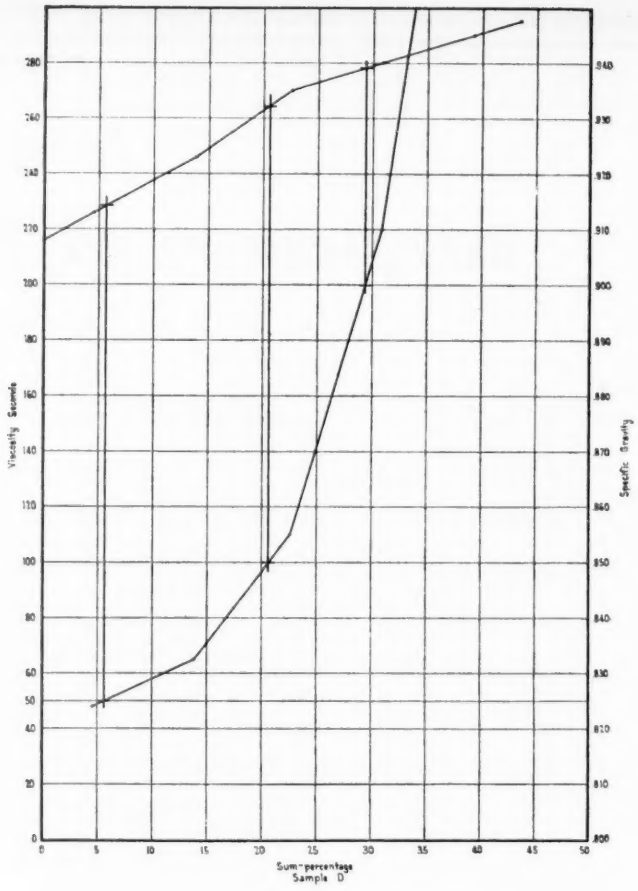

FIGURE 6

last fraction bears the same ratio to the viscosity of the fourth fraction as this does to the third.

Discussion of Approximate Summary

IT IS evident that the terms "light gasoline," "total gasoline and naphtha," etc., used in the approximate summary are arbitrary, but their meanings are fairly precise. Comparison of Hempel analyses with large-scale distillation indicates that "light gasoline" represents material with a maximum boiling point of 125°C (257°F.). The 20 per cent point of the present specification for U. S. Motor gasoline is 105°C (221°F.). If this first 20 per cent of the typical gasoline were to be distilled off in the customary laboratory method and redistilled in an Engler flask, it would be found to have a maximum boiling point very close to 125°C. In other words, the percentage of "light gasoline" as given in the Hempel analysis indicates fairly well the suitability of the crude for making motor gasoline without blending. For example, Sample A contains 5 per cent of light gasoline (which corresponds to the first 20 per cent of motor gasoline) so it would be possible to make about 25 per cent of motor gasoline from this crude without blending with natural-gas gasoline.

The percentage given as "total gasoline and naphtha" can be shown to correspond to the amount of material with a maximum boiling point of about 215°C (419°F.). Although the Federal Specification for motor gasoline allows for a maximum boiling point of 225°C (437°F), it is probable that a large part of the gasoline marketed actually has a maximum boiling point of 210° to 220°C. Consequently the percentage of "gasoline and naphtha" reported in the Hempel analysis corresponds fairly closely to the percentage of gasoline which could be made from the crude by straight run distillation. In Sample A this is shown to be 35.8 per cent. However, as indicated above, only 25 per cent of motor gasoline can be made without blending. Thus, to convert the entire 35.8 per cent into motor gasoline would require the addition of a certain percentage of low boiling material, probably natural gasoline.

THE percentage of kerosene distillate is believed to be fairly in accord with the average refinery yield. It is, however, possible to increase the yield of kerosene greatly or to diminish the yield by careful fractionation if market conditions indicate this to be desirable. The yields of gas oil and of nonviscous lubricating distillate are also believed to be equivalent to the average refinery yields. The yields of medium and viscous lubricating distillates, however, are less certain. A great deal depends on the presence or absence of waxes of different types, on the kind of refinery equipment available and particularly upon the refiner's skill in the manufacture of lubricating oil.

IT WILL be noted that a few further figures are included in the approximate summary. "Total distillate" is self explanatory. "Distillation loss" is estimated at one per cent. In the most recent analyses of the bureau the percentage of residuum and its gravity are actually measured and the distillation loss is actually determined. In the case of crudes which do not contain dissolved gas the distillation loss is rarely more than one per cent. Crudes containing natural gas in solution may show distillation losses as high as 3 per cent. "Residuum" is the oil remaining in the distillation flask at the end of the distillation. "Carbon residue of the crude" is calculated by multiplying the "carbon residue of residuum "reported by the analyst by the per cent of residuum, and dividing by 100. Most crudes contain so much volatile matter that it would be almost impossible to make this determination directly on the crude. Consequently,

4—United States Government Specifications for Lubricants and Liquid Fuels and Methods for Testing, Bureau of Mines Technical Paper 323-A.

a calculated figure is included in the approximate summary. The writer and his associates have carried on a small amount of experimental work on the asphaltic material in crude oil and believe that the carbon residue of the crude as reported in the summary is roughly proportional to the percentage of asphalt dissolved in the crude. To obtain the percentage of asphalt multiply the carbon residue of the crude by 2.5.

Conclusion

AS POINTED out in the introduction the Bureau of Mines' modification of the Hempel distillation method serves a useful purpose, particularly for the comparison of crude oils. It is not, however, sufficiently precise to be used for research on the nature of the crude oil or as a basis for crude oil prices. Its value may be compared to that of a photograph rather than a working drawing of a piece of machinery. To get an idea of what a steam engine looks like one uses a photograph; to make a detailed analysis of its construction or operation one requires the more precise working drawing.

Oil Men In Accident

KANSAS CITY, Mo., June 18.—Earl Van Buskirk, Missouri and Kansas representative of the Butler Mfg. Co., Kansas City, and Roy Spear, sales manager of the Interstate Oil Co., Kansas City, were injured recently when Mr. Spear's car plunged over an embankment into a creek in dodging a wild driver. Mr. Van Buskirk suffered a broken jawbone and cuts on the scalp and legs. Mr. Spear suffered a broken leg and ribs, and cuts of the head and body. The car was demolished.

The injured men were taken to St. Mary's hospital at Sedalia, Mo., in a car by Paul Ryan, manager, Ryan Oil Co., Warsaw, Mo., and Sam and Harry Milton and Mr. Wright, Milton Oil Co., Sedalia.

Mr. Van Buskirk and Mr. Spear will not be able to work for several weeks.

Blast Damages Union Refinery

LOS ANGELES, June 17.—An explosion at the Wilmington plant of the Union Oil Co. in a blending still June 8 caused damage of about $50,000. Operation of the refinery was not interfered with.

SPRINGFIELD, Mass. — "Bill" Richmond, who is known among his friends as "the ole army man", formerly sales representative for the Gulf Refining Co. at Springfield and vicinity, is now agent for the Gulf at Greenfield, Mass.

Improve the Color

SEVERAL refineries, in mentioning the value of the contact process, have emphasized the improvement in the color of stocks.
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Our engineers know this process thoroughly, particularly the filtering stage, which is the key stage. Let them help you.
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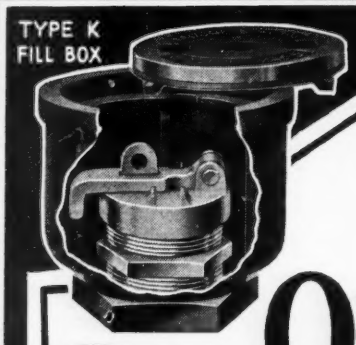
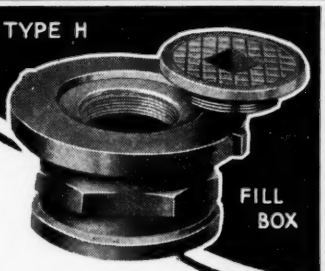
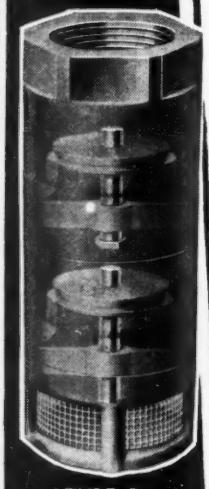
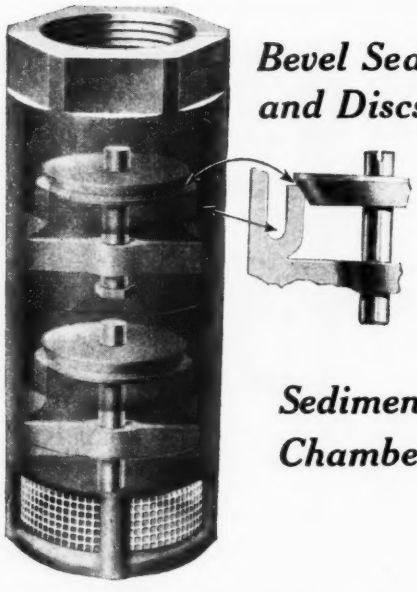


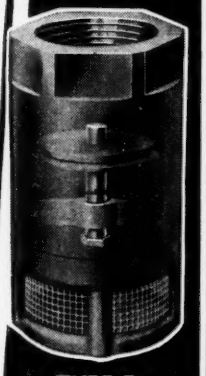


COMPLETE OIL EQUIPMENT



Over 100,000 in Use





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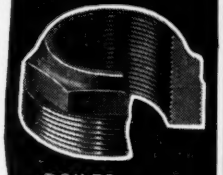

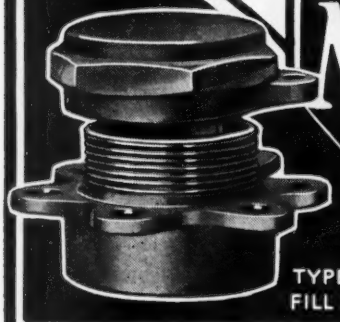

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NEW PATENTS

National Petroleum News

May 3

Refining

Oil Heater and Method of Operating Same.—John Primrose, New York, N. Y., assignor to Power Specialty Co., New York, N. Y. Filed May 11, 1925. No. 1,626,874.

Process of Obtaining Resinlike Bodies from Cracked Hydrocarbon Products.—Jacque C. Morrell and Gustav Egloff, Chicago, Ill. assignors to Universal Oil Products Co., Chicago, Ill. Filed Apr. 27, 1923. No. 1,627,054.

Method of Purifying Hydrocarbon Oils.—Jacque C. Morrell and Salmen Comay, Chicago, Ill., assignors to Universal Oil Products Co., Chicago, Ill. Filed June 22, 1925. No. 1,627,055.

Process of Treating Impure Crude Oil.—John F. Wright, El Dorado, Ark. Filed Jan. 26, 1924. No. 1,627,072.

Method for Treating Petroleum and Other Hydrocarbons.—Carbon P. Dubbs, Wilmette, Ill., assignor to Universal Oil Products Co., Chicago, Ill. Filed Nov. 30, 1917. No. 1,627,159.

Process for Treating Oil Shale.—Gustav Egloff, Chicago, Ill., assignor to Universal Oil Products Co., Chicago, Ill. Filed Jan. 10, 1921. No. 1,627,162.

Process of Treating Oil Shale.—Gustav Egloff, Chicago, Ill., assignor to Universal Oil Products Co., Chicago, Ill. Filed Jan. 10, 1921. No. 1,627,163.

Refining Oils.—Harrison Oaks Parker, Tulsa, Okla., assignor to The Mathieson Alkali Work, New York, N. Y. Filed June 18, 1925. No. 1,627,338.

Process of and Apparatus for Condensing, Treating, and Washing Hydrocarbon Vapors.—Claude Leslie Freeland, Bristow, Okla. Filed Sept. 9, 1921. No. 1,627,431.

Process and Apparatus for Treating Hydrocarbon.—William R. Howard, Washington, D. C., assignor to Universal Oil Products Co., Chicago, Ill. Filed June 9, 1922. No. 1,627,436.

Apparatus for Condensing Vapors.—Edward W. Isom, Winetka, Ill., and John E. Bell, Brooklyn, N. Y., assignors to Sinclair Refining Co., Chicago, Ill. Filed June 23, 1921. No. 1,627,544.

Production

Well Swab.—Engene Kibele, San Antonio, Tex. Filed Aug. 2, 1926. No. 1,626,614.

Pipe and Rod Spider.—Benjamin F. Hiniker, Taft, Calif. Filed Apr. 3, 1925. No. 1,626,826.

Fishing Tool.—Grover Negley, Kerrville, Tex. Filed Mar. 13, 1926. No. 1,626,843.

Flexible Swab.—Elwin W. Forrow, Anaheim, Calif. Filed May 19, 1925. No. 1,626,926.

Burner for Oil-Well Cleaners.—William A. J. Kreager, Denver, Colo. Filed Dec. 19, 1925. No. 1,626,940.

Pipe Tongs.—Charles E. Wilcox, Anaheim, Calif., assignor to Elihu C. Wilson. Filed Apr. 10, 1922. No. 1,627,260.

Miscellaneous

Safety Attachment for Tanks.—Jacob Cohn, New York, N. Y., assignor to Nonexplosive Corp. of America. Filed July 26, 1924. No. 1,626,721.

Swing-Pipe Mechanism.—Stephen H. Brooks, Cleveland, Ohio, assignor to The Oil Conservation Engineering Co., Cleveland, Ohio. Filed May 10, 1924. No. 1,626,782.

Attachment for Tank Vents.—Albert S. James, Eureka, Calif. Filed June 18, 1925. No. 1,627,095.

Apparatus for Treating Oils.—Gustav Egloff, Chicago, Ill., and William R. Howard, Washington, D. C., assignors to Universal Oil Products Co., Chicago, Ill. Filed June 8, 1921. No. 1,627,164.

Leak-Tight Sectional Tank.—Edward F. Black, Tulsa, Okla., assignor to Black, Sivalls & Bryson Mfg. Co., Kansas City, Mo. Filed Oct. 25, 1926. No. 1,627,309.

Process for the Destructive Distillation of Solid Carbonaceous Materials.— Paul Dvorkovitz, London, England. Filed Oct. 16, 1922. No. 1,627,321.

Process of and Apparatus for Treating Liquids with Purifying and Decolorizing Agents.—Johan Nicolaas Adolf Sauer, Amsterdam, Netherlands. Filed May 25, 1923. No. 1,627,343.

Process for Making Fatty Acids from Hydrocarbons.—Walther Cornelius Harry Pataky, The Hague, and Frederik Jan Nellensteijn, Delft, Netherlands. Filed Aug. 24, 1925. No. 1,627,452.

May 10

Refining

Process for the Reduction of Halogenated Hydrocarbons.—Alfred Felix Sebastien Bellone, Lyon, France, assignor to Societe Chimique des Usines du Rhone, Paris, France. Filed Jan. 28, 1924. No. 1,627,881.

Apparatus for Cracking and Distilling Hydrocarbon Oils.—Stephen L. Tingley, Nitro, W. Va. Filed Oct. 12, 1923. No. 1,627,937.

Oil Distillation and Cracking.—Stpehen L. Tingley, Nitro, W. Va. Filed Dec. 28, 1923. No. 1,627,938.

Process for Treating Hydrocarbon Oils.—Carbon P. Dubbs, Wilmette, Ill., assignor to Universal Oil Products Co., Chicago, Ill. Filed Dec. 17, 1921. No. 1,628,127.

Treating Hydrocarbons.—William S. Hadaway, Jr., New Rochelle, N. Y., assignor to The Texas Co., New York, N. Y. Filed Sept. 15, 1923. No. 1,628,143.

Process and Apparatus for Converting Oils.—Carbon P. Dubbs, Wilmette, Ill., assignor to Universal Oil Products Co., Chicago, Ill. Filed Oct. 8, 1921. No. 1,628,236.

Method of Refining Petroleum.—Walter E. Lummus, Lynn, Mass. Filed May 21, 1923. No. 1,628,252.

Process and Apparatus for Cracking Petroleum Oil.—Robert T. Pollock, Boston, Mass., assignor to Universal Oil Products Co., Chicago, Ill. Filed Dec. 6, 1920. No. 1,628,270.

Art of Sweetening Hydrocarbon Oils.—Max G. Paulus, Casper, Wyo., assignor to Standard Oil Co., Whiting, Ind. Filed May 28, 1925. No. 1,628,423.

Treating Hydrocarbon Oils.—William L. Coultas, Jr., Seaford, N. Y. Filed July 12, 1920. No. 1,628,532.

Apparatus for the Treatment of Impure Petroleum Oils.—John D. Brady, El Dorado, Ark., Filed Aug. 29, 1925. No. 1,628,574.

Production

Pump Jack.—John August Lund, Batavia, Ill., assignor to Challenge Co., Batavia, Ill. Filed Oct. 18, 1926. No. 1,627,708.

Sucker-Rod Hanger.—George E. Fritts, Taft, Calif., assignor to F. A. Keefover and Daisy Keefover. Filed May 2, 1923. No. 1,627,733.

Casing Head for Oil Wells.—Wilson B. Wigle, Long Beach, Calif. Filed Nov. 10, 1925. No. 1,627,945.

Rotary Drilling Machine of Well-Boring Apparatus.—James Childs, Barrow-in-Furness, England, assignor to Vickers, Ltd., Westminster, England. Filed July 15, 1924. No. 1,628,032.

Fishing Tool.—Paul G. Gates, Long Beach, Calif. Filed Mar. 4, 1926. No. 1,628,042.

Well-Drilling Apparatus.—Waldo Sheldon, Greenwich, Conn. Filed May 29, 1923. No. 1,628,282.

Well-Drilling Chuck.—Waldo Sheldon, Greenwich, Conn. Filed Sept. 6, 1924. No. 1,628,283.

Apparatus for Clearing Oil Wells of Paraffin Deposits.—Henry J. Haber, Cleveland, Ohio. Filed July 15, 1922. No. 1,628,401.

Combined Collar Buster and Casing Spear.—Paul Dietrich, Apperson, Okla. Filed Sept. 16, 1924. No. 1,628,533.

Natural Gasoline

Apparatus for Absorption and Distilling of Hydrocarbons.—Daniel L. Newton, Fullerton, Calif. Filed Dec. 9, 1925. No. 1,628,055.

Vapor Condenser.—John J. Wilt, Bakersfield, Calif. Filed Mar. 22, 1926. No. 1,628,210.

Miscellaneous

Oil Separators.—Thomas Kitchin Massicks, Brakpan, Transvaal, South Africa. Filed Jan. 29, 1925. No. 1,627,569.

Oil Rectifier.—William G. Wall, Indianapolis, Ind., assignor to Rectifier Manufacturing Co., Indianapolis, Ind. Filed Sept. 26, 1925. No. 1,628,085.

Nonevaporating Oil Tank.—Frank Albert

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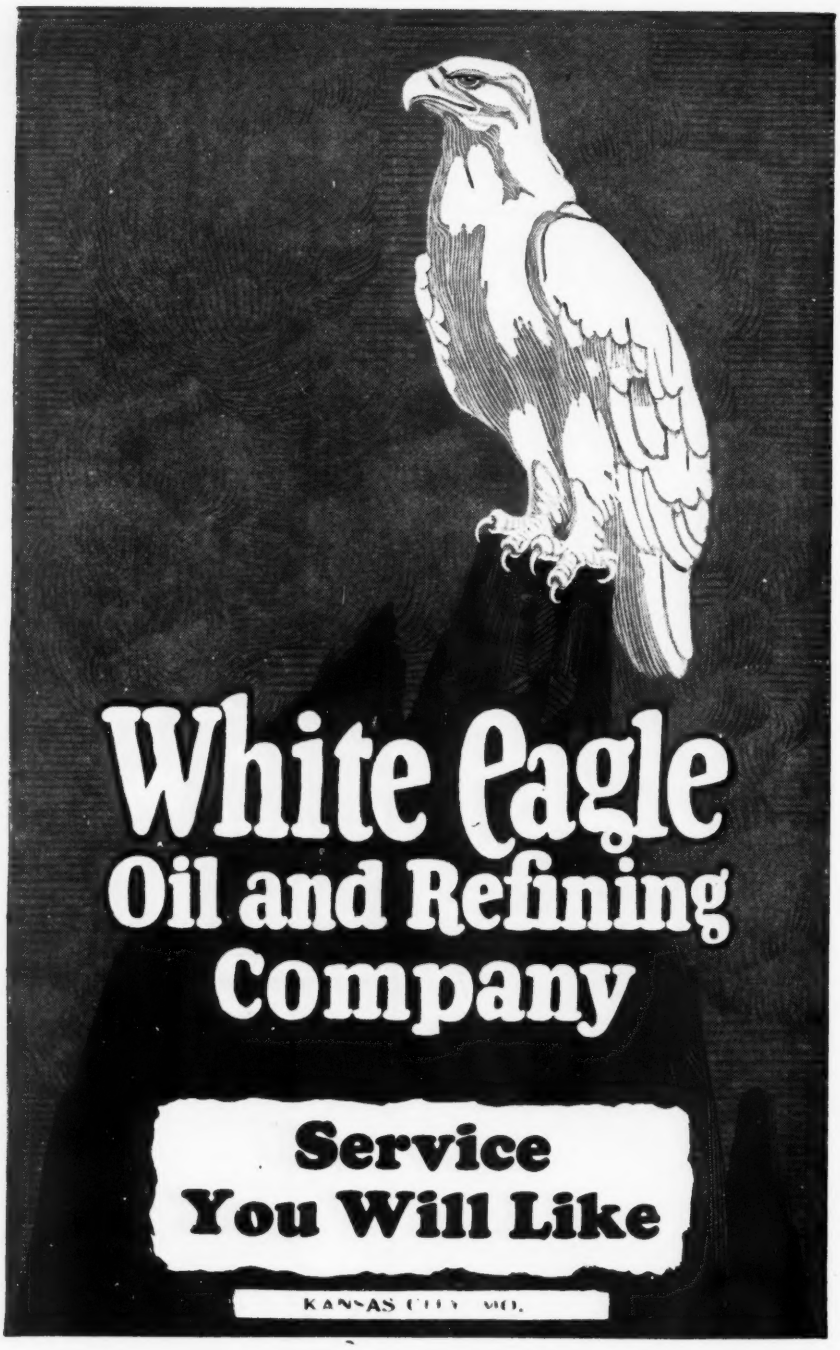

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lddings, Warren, Ohio. Filed July 18, 1924. No. 1,628,246.

Seal.—Harold V. Atwell, Whiting, Ind., assignor to Standard Oil Co., Whiting, Ind. Filed Oct. 16, 1925. No. 1,628,348.

Apparatus and Method for Burning Liquid Fuel.—Ernest H. Peabody, Pelham Manor, N. Y., assignor to Peabody Engineering Corp., New York, N. Y. Filed June 7, 1922. No. 1,628,424.

May 17

Refining

Lubricant and Process of Making the Same.—Arman E. Becker, Elizabeth, N. J., assignor to Standard Development Co. Filed Nov. 21, 1924. No. 1,628,646.

Method of Lubricating Internal-Combustion Engines.—Arman E. Becker, Elizabeth, N. J., assignor to Standard Development Co. Filed Oct. 29, 1925. No. 1,628,647.

Condenser for Stills.—Ernon V. Oliver, Portland, Oreg. Filed Mar. 5, 1925. No. 1,628,736.

Continuous Process of Treating Oils.—Orange J. Salisbury, Salt Lake City, Utah. Filed Apr. 11, 1924. No. 1,628,747.

Production

Pump Jack.—Elmer R. Thomas and Pearley E. Langfitt, Shidler, Okla. Filed Nov. 17, 1925. No. 1,628,692.

Pump Jack.—William E. Wentworth, San Antonio, Tex. Filed July 13, 1926. No. 1,628,702.

Rotary Draw Works.—Lester H. Keim, Pasadena, and Richard E. Kline, Alhambra, Calif., assignors to Oil Well Supply Co., Los Angeles, Calif. Filed June 29, 1925. No. 1,628,847.

Deep-Well Gas and Oil Separator.—Karl P. Neilsen, Long Beach, Calif. Filed May 13, 1926. No. 1,628,900.

Pump-Plunger Assembly.—Karl P. Nei'sen, Long Beach, Calif. Filed May 18, 1926. No. 1,628,901.

Apparatus for Pumping Liquids.—Edson R. Wolcott, Los Angeles, Calif. Filed Oct. 16, 1924. No. 1,628,943.

Cementing Head.—Herbert A. Davis and Cleo F. Davis, Torrance, Calif. Filed Apr. 22, 1924. No. 1,629,022.

Well-Drilling Apparatus.—Thomas S. Dietle, Pawhuska, Okla. Filed Oct. 14, 1926. No. 1,629,024.

Automatic Catching Device for Well Tubing.—Stephen V. Dillon, Tulsa, Okla. Filed Feb. 8, 1926. No. 1,629,261.

Catching Device for Well Tubing.—Stephen V. Dillon, Tulsa, Okla. Filed Mar. 27, 1926. No. 1,629,262.

Catching Device for Well Tubing.—Stephen V. Dillon, Tulsa, Okla. Filed Jan. 19, 1927. No. 1,629,263.

Natural Gasoline

Process of Removing Hydrogen Sulfide from Coal or Water Gases.—William E. Leuchtenberg, New York, N. Y. Filed July 20, 1925. No. 1,629,396.

Miscellaneous

Insulation Construction for Containers.—John S. Carroll, Yonkers, N. Y., assignor to Johns-Manville Corp., New York, N. Y. Filed Dec. 28, 1923. No. 1,629,255

May 24

Refining

Furnace.—George Davis White, Port Arthur, Tex., assignor to The Texas Co., New York, N. Y. Filed Sept. 7, 1923. No. 1,629,606.

Process of Producing Gasoline.—Horace B. Setzler, Coffeyville, Kans., assignor to The National Refining Co., Cleveland, Ohio. Filed June 9, 1916. No. 1,629,810.

Process for Cracking Hydrocarbon Oils.—Warren F. Faragher and William Arthur Cruse, Pittsburgh, Pa., assignors to Gulf Refining Co., Pittsburgh, Pa. Filed Jan. 15, 1921.

Electrically-Welded Bubble Tower.—Richard Stresau, Wauwatosa, Wis., assignor to A. O. Smith Corp., Milwaukee, Wis. Filed Aug. 12, 1925. No. 1,630,037.

Furnace for the Treatment of Spent Fuller's Earth.—Robert E. Wilson, Chicago, Ill., assignor to Standard Oil Co., Whiting, Ind. Filed Feb. 23, 1924. No. 1,630,044.

Treating Sludge Acid.—Francis M. Rogers and Frank V. Grimm, Whiting, Ind., and Gerald L. Wendt, Chicago, Ill., assignors to Standard Oil Co., Whiting, Ind. Filed Aug. 14, 1924. No. 1,630,074.

Rustproofing Oil.—Robert E. Wilkin, Whiting, Ind., assignor to Standard Oil Co., Whiting, Ind. Filed Mar. 13, 1925. No. 1,630,101.

Producing

Tongs and the Like.—George E. Nix, Electra,

Tex. Filed July 12, 1926. No. 1,629,631.

Casing Head.—Morgan L. Sweeney, Los Angeles, assignor to Union Tank & Pipe Co., Filed Aug. 19, 1924. No. 1,629,749.

Natural Gasoline

Gas Gravity Balance.—Homer Roland Pierce, Bartlesville, Okla., assignor to Indian Territory Illuminating Oil Co., Bartlesville, Okla. Filed Feb. 19, 1926. No. 1,629,526.

Miscellaneous

Tank-Gauging Device.—George O. Wilson, San Francisco, Calif., assignor to Standard Oil Co. of California, San Francisco. Filed Nov. 10, 1924. No. 1,629,758.

May 31

Production

Pump—Thomas D. Cleage, St. Louis, Mo., and Washington S. Smith and James R. Murray, Tulsa, Okla. Filed Jan. 21, 1924. No. 1,630,256.

Sucker Rod Elevator—Samuel McGregor, Buena Park, Calif. Filed May 2, 1925. No. 1,630,537.

Pipe Slip—William D. Davidson, Los Angeles, Calif., assignor of one-half to Emsco Derrick & Equipment Co., Los Angeles. And one-half to Titusville Forge Co., Titusville, Pa. Filed Mar. 29, 1924. No. 1,630,732.

Natural Gasoline

Apparatus for Measuring and Indicating the Flow of Gases.—Harry Y. Norwood, Avon, and Kenneth L. Tate, Rochester, N. Y., assignors to Taylor Instrument Companies, Rochester, N. Y. Filed Aug. 4, 1925. No. 1,630,307.

Apparatus for Measuring the Flow of Gases.—Kenneth L. Tate, Rochester, N. Y., assignor to Taylor Instrument Companies, Rochester, N. Y. Filed May 16, 1925. No. 1,630,318.

Apparatus for the Extraction and Recovery of Volatile Liquids.—Edward Allan Ironside, London, England. Filed Nov. 6, 1925. No. 1,631,036.

Process for the Recovery of Volatile Solvents.—Rudolf Oertel, Hanover, Germany, assignor to Metallbank und Metallurgische Gesellschaft Aktiengesellschaft, Frankfort-on-the-Main, Germany. Filed June 8, 1926. No. 1,631,052.

Miscellaneous

Gas-Tight Cable Support for Tanks.—Stephen H. Brooks, Los Angeles, Calif., assignor to Brooks Engineering Corp., Los Angeles, Calif. Filed Nov 15, 1926. No. 1,630,826.

Oil Tank.—Watt M. Nichols, Ranger, Tex. Filed Aug. 14, 1925. No. 1,631,051.

June 7

Refining

Process of Making Motor Fuel.—Roy Cross, Kansas City, Mo., assignor to Gasoline Products Co. Inc., New York, N. Y. Filed Sept. 12, 1925. No. 1,631,401.

Production

Plug for Oil Wells.—Benjamin E. Parrish, Honey Grove, Tex., assignor of one-half to D. W. Maurer, Dallas, Tex. Filed Aug. 11, 1925. No. 1,631,152.

Derrick.—Clark E. Ranney, Tulsa, Okla. Filed Aug. 9, 1926. No. 1,631,156.

Deep-Well-Pump Connecting Device.—George E. Willers, Lawrenceburg, Ind., assignor to A. D. Cook, Inc., Lawrenceburg, Ind. Filed July 16, 1925. No 1,631,390.

Apparatus for Plugging Wells.—Myron M. Kinley, Tulsa, Okla. Filed June 4, 1926 No. 1,631,419.

Take-Up Reel.—Thomas Joseph Schuetz, Tulsa, Okla., assignor to Braden Steel & Winch Co., Tulsa, Okla. Filed Dec. 27, 1926. No. 1,631,432.

Reamer Drill Bit.—Allen D. Alford, Dallas, Tex. Filed Dec. 6, 1926. No. 1,631,449.

Well-Drill-Pipe Float Coupling.—Reuben C. Baker Casing Shoe Co. Filed Dec. 1, 1926. No. 1,631,509.

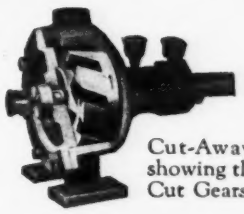
Sucker-Rod Elevator.—Earl E. Westmoreland and Samuel G. Taylor, Oil City, La. Filed Aug. 16, 1926. No. 1,631,845.

Miscellaneous

Tank Car.—Victor Willoughby, Ridgewood, N. J., assignor to American Car and Foundry Co., New York, N. Y. Filed June 15, 1926. No. 1,631,304.

Pipe-Line-Cleaning Device.—John M. Thompson and William H. Thompson, Buffalo, N. Y. Filed Sept. 19, 1923. No. 1,631,562.

Process of Distilling Oil Shale.—Carl T. Loughrey, Los Angeles, Calif. Filed May 5, 1921. No. 1,631,637.



Cut-Away section showing the Helical Cut Gears.

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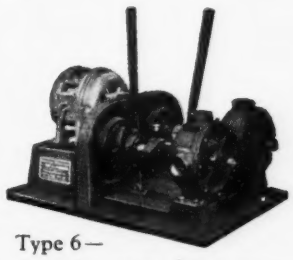
ALTHOUGH the Rotary Pump is an old invention the Perfection Rotary Pump is constructed in an entirely new way, that is mechanically and scientifically correct, and differing very materially from any other rotary pump on the market. The outstanding feature in the Perfection Pump is the helical (spiral) cut gears, a well established mechanical principle, which results in a very highly efficient, durable and trouble-proof pump, remarkably free from vibration.

Study the illustration above and note that there are only two moving parts, the rotor and the idler pinion. Note also that the teeth in the pinion and the rotor go into mesh in a smooth and gradual way, preventing back lash and eliminating vibration.

The shearing cut on the column of liquid at the intake and discharge ports is another feature that makes the Perfection a smooth running pump.



Type 6—
A twin gear drive unloading pump with motor.

Write for our new Bulletin No. 271 which fully describes the construction of the Perfection Rotary Pump and illustrates several types built especially for the Oil Jobber.

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Visiting Around the Refineries

By Paul Truesdell

National Petroleum News

Refinery is Offered for Sale

THE refinery of the Interstate Gasoline Co., at Iowa Park, Tex., was to be offered at public sale on Monday, June 20, according to the statement of N. H. Colwell who is one of the receivers. The other is Joseph P. Tumulty, formerly secretary to President Woodrow Wilson. The refinery is a topping plant of 2500 barrels a day crude capacity. It is located on the Fort Worth & Denver City railroad about 10 miles west of Wichita Falls.

The plant is connected up with The Texas Co. and the Wichita Pipe Line Co. crude pipe lines, the receivers state.

British Technologist Visiting in U. S.

DR. FRANK TINKER of Birmingham, England, was a visitor at this office last week. Dr. Tinker has been in America a couple of months, having arrived at Montreal and proceeded to New York where he has spent most of his time. He is combining business with a sightseeing trip and plans to visit the various refining centers as well as places of general interest during his stay.

He is particularly interested in the American refining situation because he is the inventor of a cracking process which was operated for some time on a commercial scale in England. He says it gave very satisfactory results.

Another Refinery Record Broken

DESPITE the depression felt by many in the oil business some of the refineries go right ahead breaking records for quantity of products made and sold.

A little while ago we carried a note on this page to the effect that the Pure Oil Co.'s Heath refinery had broken its own best record for one month. Now the company publication of the Sun Oil Co., "Our Sun," announces that the Toledo refinery of that company in April set a new high mark in output. The same article also states that W. M. McClelland, superintendent of the plant, who has been sick, is regaining his health.

Saving With Anti-Knock Fuel

IN THE same issue of "Our Sun", A. Ludlow Clayden, Sun Co. research engineer, has an interesting article on "Gasoline, What It Was, What It Is, What It Will Be." Mr. Clayden cites a test made in a hilly city by a taxicab company to compare the economy of anti-knock fuel with ordinary gasoline. Two groups of 25 cabs each were used in the test. One group was run on anti-knock fuel, the other on ordinary gasoline. The test was for 30 days and was made in the winter.

While the performance of the individual cabs differed widely, the average of the two groups showed 13.81 per cent more miles per gallon for the group using the anti-knock fuel. No spark, carburetor or other adjustments were made on the test cabs before the trial was started. Mr. Clayden does not state what anti-knock fuel was used and he does say that this advantage indicated is greater than would be noted in the ordinary passenger car in ordinary use.

Richfield Completing More Cracking Units

RUFUS J. PILCHER, statistician of the Richfield Oil Co., Los Angeles, states that company has nearly completed two Cross units with capacity of 4,000 barrels a day each. These, with the 4,000-barrel unit at present operating, will give the company 12,000 barrels a day cracking capacity. The cracking plant is at the company's Hynes, Cal., refinery.

David E. Day is refinery engineer of the Richfield. He is a son of David T. Day, a petroleum technologist of international reputation. David E. Day was associated with his father in the preparation of Day's Handbook of the Petroleum Industry. He has introduced many novel features into the Richfield plants, it is stated by Mr. Pilcher.

Solar Putting In Big Pipe Still

AN INSTALLATION that it seems will do about everything but sell the products, is being put in at the plant of the Solar Refining Co. at Lima, O. Arthur G. McKee Co., and the associated Widdell Engineering Co. of Cleveland, are engineers and contractors on the job. According to H. E. Widdell, the plant consists of a pipe still and bubble towers which it is expected will run 7500 barrels a day of Lima and Illinois crude, taking off in one throughput, gasoline, painters' naphtha, kerosene, two grades of gas oil for cracking, wax distillate that can be pressed without cracking or re-running, and fuel oil.

These will be finished products as they come from the towers, except that the gasoline will be doctor treated in a continuous treating plant before being loaded. The installation will be completed about Oct. 1.

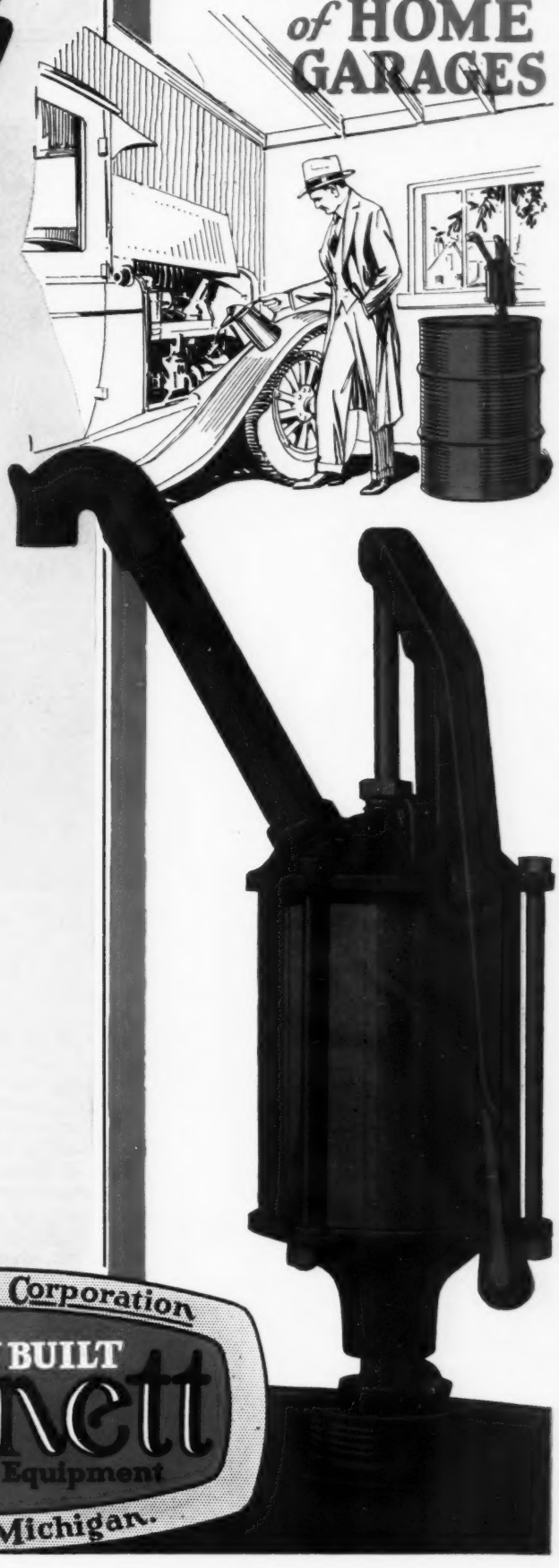
"Stop the Leaks and Save the Drops"

THIS war time slogan of the federal oil administration is brought to mind by a significant article in The Look Box, the organ of the refining department of The Texas Co., showing the possibilities of loss from small leaks. The leaks referred to are in water pipes but the same scale of losses, or greater, would hold true with oil, and the needless waste of water in many refineries where it is scarce and expensive would be an important matter in itself.

Losses of water and their money value are estimated in the article as follows: 1/64-inch leak, two gallons per hour loss, cost 1 cent a day; 1/32-inch leak, 8 gallons an hour loss, cost 5 cents a day; 1/16-inch leak, 34 gallons per hour, cost 21 cents a day; ⅛-inch leak, 137 gallons an hour, cost 86 cents a day; ¼-inch leak, 514 gallons an hour, cost $3.21 a day; ½-inch leak, 2057 gallons an hour, cost $12.84 a day.

TEST "IDEA IS AMERICA!

Sell MORE OIL thru MILLIONS of HOME GARAGES



Here's How You Benefit

The moment you present the "continuous-use test" idea to the public you will find that, in addition to drum sales, your

1. Quart sales of oil increase
2. Gasoline sales increase
3. Grease sales increase
4. Crank-case "drains-and-fills" increase
5. Morale of sales force heightens
6. Public favorable interest is stimulated
7. New trade is attracted
8. Steady friendships are formed for your brand

There is nothing like this basic idea, definite campaign and organized drive for putting a sales organization upon its toes. It "resells" each man upon his own selling ability and upon the alertness of his own organization. It renews his faith in the superiority of "his" oils—your oils; it inspires him to new, more intensive effort. These are permanent benefits—like the permanent consumer good-will won for you by the drumful test with proper equipment.

Already Fully Tested

The foregoing is not theory. It is fact. Complete records of every application of the idea are on file—all reflecting unmistakable credit upon the soundness of this merchandising idea.

Your oil, your organization, your location, your prices—all these factors have been duplicated in previous successful presentations.

THE IDEA WILL WIN ALL THE ABOVE BENEFITS FOR YOU. *Check up!* Write us for Full Facts.

MORE OIL for YOU and PERMANENTLY!

Bennett Pumps Corporation

QUALITY BUILT

Bennett

Oil and Grease Equipment

Muskegon, Michigan.

Our Industry — A Page of Facts and Personalities

National Petroleum News

By Paul Wagner

MILES T. COGLEY, president, Texas-Mexican railroad, and formerly president, First National Bank of Laredo, has been elected president of the Texas-Mexican Oil & Refining Co., Inc., Laredo, to succeed the late J. N. Galbraith. Mr. Cogley will be in active charge of the refinery at Laredo, which operates on Mirando crude.

Besides Mr. Cogley, the board of directors consists of C. R. Cole, president, Cole Petroleum Co.; J. S. Penn, former Laredo newspaper publisher; S. W. DeWolf, vice-president and general manager, Texas-Mexican railroad; R. K. Mims, president, First State Bank & Trust Co., Laredo, and Frank A. Lattig, capitalist.

Lattig is secretary-treasurer of the refining company. M. M. Leyendecker is vice-president and E. H. Mehlburger is plant superintendent.

* * *

SOUTHWEST GAS CO., recently organized by L. C. Doney, Jr., Houston, has acquired central-west Texas properties in the Cross Plains-Rising Star district which were formerly owned by Crabb & McNeel and Tom Bryant. Besides field properties, the buyers obtained gas franchises and complete distributing systems at Pioneer, Burkett and Cross Cut. Crabb & McNeel and Bryant transferred their properties to C. O. Moore, who sold them to the Southwest Gas Co. for approximately $1,000,000.

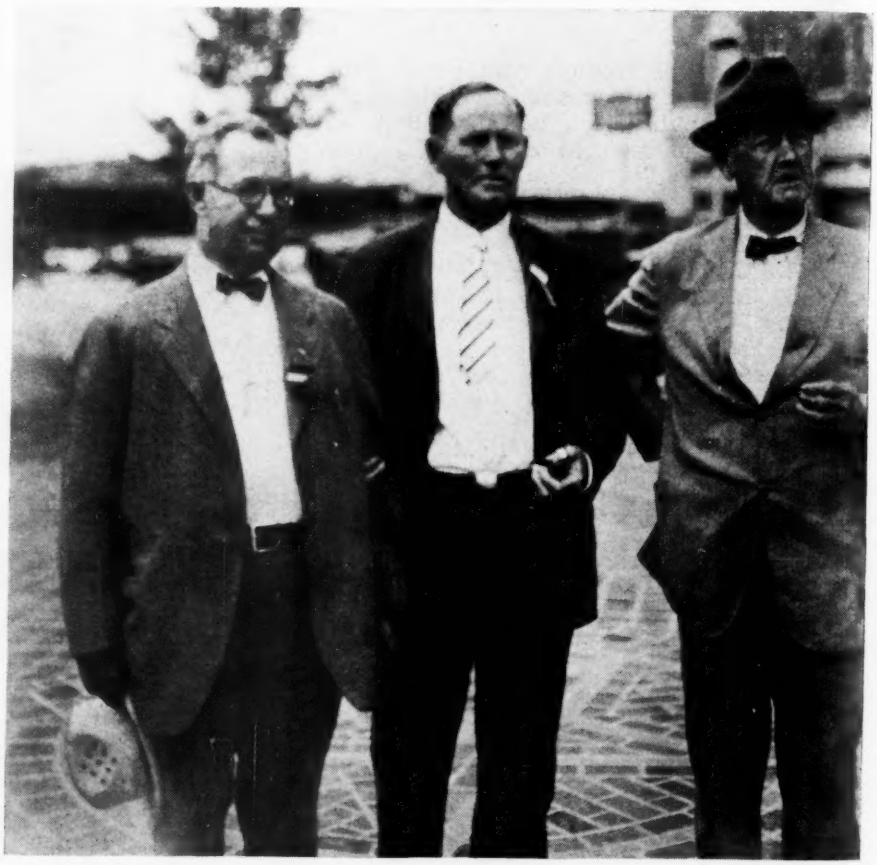
The Southwest Gas Co., which also has franchises for distributing systems in Cuero, Yoakum, Gonzales and other southwestern Texas towns, will get its supplies in adjacent territory.

John R. Saunders, formerly in the engineering department of the Southern Gas Co., at San Antonio, is now chief engineer of the Southwest Gas Co.

* * *

WALTER M. SMALL, formerly chief geologist of the Companias del Agwi, S. A., at Tampico but more recently identified with Texas Panhandle operations, was married late in May at New Braunfels, Texas. His bride was Mrs. Kathleen Hull Harvey, who lived in Tampico for several years and worked for the Transcontinental Petroleum Co. She formerly was secretary to T. R. Batte, who was at one time general manager of the Agwi companies.

T. J. PARKER, field superintendent for the Cortez-Aguada interests, has been placed in charge of the No. 7 Quebrache well on lot 78, southwest of Tampico, which was recently completed for 1,200 barrels daily. Two new locations have been made and development will be rushed ahead of the rainy season.



Left to right: J. E. Sanders, Eastland, Texas, Wentz Oil Corp.; Jess Hamilton, Dallas, Sun Oil Co., and Col. Peck, Corsicana, Texas, Peck Tank Co.

J. E. SANDERS, Wentz Oil Corp., Eastland, Texas; Jess Hamilton, land man and scout for Sun Oil Co., Dallas, and Col. Peck, Peck Tank Co., Corsicana, are veterans in the industry. Mr. Sanders has been with Wentz in the southwest for 18 years. Mr. Hamilton is known in virtually every field of Texas and has been in the Sun organization before and since Ranger days. Peck, who is considerably the senior of his companions in the picture but whose age he failed to disclose, lays claim to being the oldest tank builder in Texas.

* * *

BUFFALO OIL & GAS CO., operating in southern Arkansas and eastern Mississippi, with Stephens, Ark., as headquarters, has elected J. H. Peterson, New York, president; R. B. Allen of Stephens, vice-president, and Harry Spooner, Stephens, secretary-treasurer. S. E. Derby, New York, is a member of the board of directors.

THE West Texas Oil & Gas Association has been organized at Abilene to serve as a local organization to further the interests of operators in the sand pay producing area west of the general Ranger territory. Abilene has become an important center for developments in the general area opened for operations by the Roeser-Pendleton pool in Shackleford county and the Noodle Creek field in southwestern Jones county. J. E. Redburn of the Midwest Exploration Co. was chairman of the organization meeting.

* * *

JOHN LOCK of the petroleum engineering department of the Pure Oil Co., Mexia headquarters, drives a roadster equipped with treaded tires. The first two casings were changed after his car had gone 12,400 miles without a puncture; at 13,500 miles he still had one casing on the car that had not been punctured or changed.

The Economy of Greater Speed

Every trip in and out of the hole SAVED, means that the drilling cost per foot has been lowered
HUGHES "SELF-CLEANING" CONES
have proven by actual performance throughout the Rotary fields of the world that they make from three to five times more hole per set.

At Your Supply Store

HUGHES TOOL COMPANY

Service Plants
LOS ANGELES, CALIF.
OKLAHOMA CITY, OKLA.

MAIN OFFICE AND PLANT
HOUSTON, TEXAS

Export Office
NEW YORK CITY, N.Y.

CANNON BALL Service

The kind of service that helps Jobbers GET customers and then *HOLD* them with products of highest quality. *Phone, wire or write for quotations.*

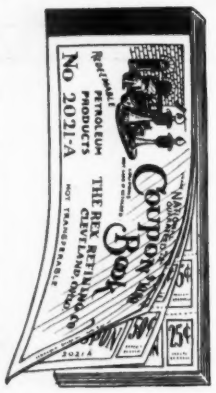
58-60 U. S. Motor Gasoline
64-66-375 E. P. Aviation
41-43 W. W. Kerosene
36-38 Straw Distillate
32-36 Gas Oil Uncracked
22-26 Fuel Oil (Cushing or
24-26 Fuel Oil Blackwell)

PRODUCING
REFINING
TRANSPORTING
MARKETING

Refineries at;
CUSHING and
BLACKWELL,
OKLAHOMA

CUSHING REFINING AND GASOLINE CO

Cushing, Oklahoma



NATIONAL GUARANTEED COUPON BOOKS

adopted by filling stations everywhere

Hundreds of oil companies, large and small, use coupons, and more of them are coming to NATIONAL every day.

Write us for samples, prices and our sales plan.

NATIONAL CHECKING CO.

271 Chestnut St. St. Paul, Minn.

Celebration Arranged for Seneca Spring

CLEVELAND, June 18.—A celebration commemorating the three hundredth anniversary of the first record of oil on the North American continent, will be held July 23 at Cuba, Allegheny county, N. Y., near the famous Seneca oil spring.

Arrangements are being made by the New York State Oil Producers' Association which will be assisted by the New York state departments of history and geology, committees from both houses of the state legislature, Seneca Indians, and the Franciscan fathers from the St. Bonaventure monastery. A brochure covering mention of the oil spring by early explorers has been prepared by Lewis H. Thornton, former president of the New York Producers' Association.

It is planned to have the American Petroleum Institute represented at the celebration by President E. W. Clark and a committee headed by R. C. Holmes, president, The Texas Corp. The legislature's committees will be headed by President John Knight of the senate and Speaker Joseph McGinnies of the assembly.

First mention of the Seneca spring was made in a letter dated July 18, 1627, by Father Joseph de la Roche d'Allion, a Franciscan explorer who was journeying from north of Niagara into the wilds of western New York. Because July 18 falls on Monday this year, the celebration has been set for the following Saturday, July 23.

Michigan Jobber Sponsors Hawaiian Flight

FLINT, Mich., June 18.—Not to be outdone or left out of the flying history being written daily since the world-renowned Lindbergh and Chamberlin trans-Atlantic non-stop flights, the Lincoln Petroleum Products Co. here is sponsoring a non-stop flight from San Francisco to Hawaii, about 3000 miles. The flight will be attempted by a Flint pilot, who will be accompanied by Miss Mildred Doran, 21-year-old school teacher of Caro, Mich.

A large monoplane has been constructed at the Lincoln Standard Aircraft Co. works at Lincoln, Neb. for this flight. The plane is equipped with a Wright "Whirlwind" motor and has a larger gasoline capacity than either the "Spirit of St. Louis" used by Lindbergh or the "Columbia".

The plane was to be transported to Flint previous to June 15, on which date, if weather conditions were favorable, the flight was to start to San Francisco. The plane will be placed in a special hangar in the Lincoln Petroleum company's airport at Flint. A non-stop flight from Flint to

San Francisco will be attempted prior to the trans-oceanic hop, but the plane will stop at San Francisco to await favorable weather.

A "flip of the coin" will decide the identity of the pilot. Lieut. Eyer Sloniger, friend and co-student with Lindbergh when the latter was learning to fly, will flip a coin with Augie Peddlar as to which one shall pilot the plane to Hawaii.

Ray Page, who is reputed to have taught Lindbergh and Sloniger to fly, has been at Lincoln, Neb. superintending the construction of the monoplane.

The Lincoln Petroleum company has used airplanes frequently for some time as an advertising stunt for its products.

Gas Properties Bought by Lone Star Co.

DALLAS, June 17.—Lone Star Gas Co., with Dallas headquarters, June 1 acquired west Texas gas properties of The Texas Co. The transaction, terms of which were not made known, gives the Lone Star gas wells, pipe lines, compressor stations and local distributing systems in 10 west Texas towns, including Moran, Albany, Abilene, Clyde, Baird, Putnam, Cisco, Eastland, Sedwick, and Crystal Falls. It is understood the Lone Star plans to extend the system westerly to Sweetwater, Colorado City, and elsewhere.

LAWRENCE, Mass. — Haffner's Service Station, which has been open one and one-half years, has added two 10,000 gallon storage tanks to its bulk station, bringing storage capacity to 86,000 gallons. The station sells about 500,000 gallons of gasoline a year.

ADAMS, Mass.—E. Vadnais & Sons, proprietors of the Mohawk Garage here, opened a filling station and accessory store here June 18. Colonial gasoline, ethyl gasoline, Penzoil, Exide batteries, and U. S. tires and tubes are being handled, according to V. P. Vadnais.

MIDDLEBORO, Mass.—A $15,000 service station is nearing completion here. It will be operated by E. A. Sisson, proprietor of the Middleboro Garage and Filling Station.

LOUISVILLE, Ky., June 18.—Berry V. Stoll, vice-president, Stoll Oil Refining Co., Louisville, married Miss Alice Speed of Louisville June 11 at St. Paul's Episcopal church. Mr. and Mrs. Stoll are on their honeymoon in Europe and will return to Louisville on Sept. 1.

THE CUSTOMER'S *HASTE* CAN *SPEED* YOUR PROFITS

To sell more oil—speed up your service.
The American motorist wants fast service. He wants to be on his way. Three or four minutes lost from golf or business is more than aggravating.

Your oil display in Rhodes Prefilled Dispensers reminds the motorist that he needs oil. Placed on Rhodes Display Stands near the gas pumps it suggests quick action. No delay at this station. A couple of quarts of oil in less than a minute.
Speedy service means more sales—and more profit.
Cash in on this hurrying habit of the motorist by giving him quick service with Rhodes Oil Selling Equipment.

Write today for prices.

JAY B. RHODES COMPANY
Kalamazoo, Michigan

Rhodes Dispensers are speedy pouring, clearly transparent, accurate measures. They will help you boost your sales on your most profitable product—Oil.

RHODES *PRE-FILLED OIL DISPENSERS*

Certified All Pennsylvania Blending Oils

For Reasonably Prompt Shipment

150 @ 70	3-4 Color
180 @ 70	4-5 Color
200 @ 70	4-5 Color

Guaranteed 100% PURE PENNSYLVANIA OIL

West Penn Oil Company

Permit No. 515 ***Wire-Write-Phone*** **Warren, Pa.**

BENZOL

Pure—90%—Motor

WILLOCK OIL CORPORATION
First National Bank Building · Phone Atlantic 3110
PITTSBURGH, PA.
Everything in Petroleum

New Equipment for Plant Improvement

Personal Notes of the Manufacturers

National Petroleum News

Amtorg Trading Corp. of New York announces that orders for oil well supplies totalling $2,215,000 have been placed in the United States, for shipment to the oil fields of the Soviet Union, since Oct. 1. Additional orders for about $2,200,000 are to be placed shortly.

Equipment purchased includes seamless drill pipe to the value of $425,000, drilling equipment for about $800,000, and pumping equipment.

Rotary drilling machinery designed by Soviet engineers is being built for the Soviet oil trusts in American plants, and likewise cementing equipment designed in the Soviet Union.

A number of electrical motors purchased from Westinghouse and the International General Electric Co. for the Soviet oil fields will be shipped during the next few months.

* * *

S. H. Brooks, president of the Brooks Engineering Corp. of Los Angeles, known throughout the oil industry for his many inventions of fire protection equipment for tanks, when in Cleveland last week, arranged for the opening of the New York sales office. The New York office at 30 Church St. will be in charge of T. E. Ward of the Oil Field Equipment Co. It will have charge of the sales of all Beco equipment on the Atlantic coast. The Oil Field Equipment Co. represents many other oil equipment companies, both in California and the west.

* * *

Farrell Manufacturing Co., Joliet, Ill., has issued three booklets describing its line of tank trucks. The booklets are of unusual appearance, the covers being in striking colors. Various types of tanks made by the company are described in detail and illustrated with photographs.

* * *

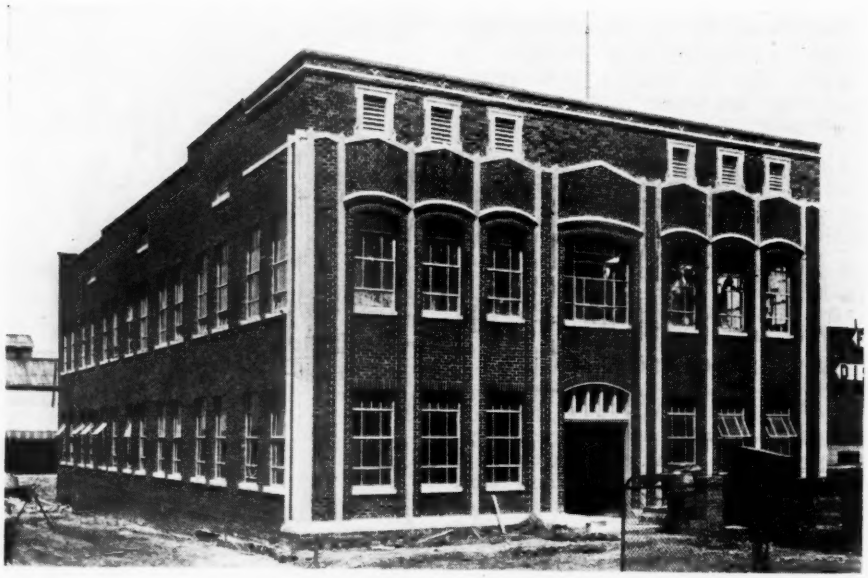
Lincoln Electric Co., Cleveland, O., has just brought out a 600-ampere metal electrode holder to handle electrodes up to one-half inch in diameter, for heavy current arc welding. The electrode holder is known as type TR.

* * *

Graham Brothers division of Dodge Brothers, Inc., Detroit, are sending out to the trade literature describing and illustrating the new engine used in their trucks and commercial cars.

* * *

Walter A. Zelnicker Supply Co., St. Louis, is putting out to the trade bulletins 337 and 338 describing the equipment handled by the company.



Frick-Reid Supply Co.'s new, modern office building, Trenton av. and Frisco R. R., Tulsa.

Celite Products Co., Los Angeles, is sending out notice to the trade that it has been awarded a final decree by the United States court for the southern district of California in a suit brought by it against the Featherstone Insulation Co. for alleged infringement of U. S. patents Nos. 1,076,126 and 1,184,184. The first patent pertains to a molded diatomaceous insulating brick, manufactured and sold under the trade name Sil-O-Cel C-22, and the latter patent to a composition consisting of a calcined diatomaceous aggregate, manufactured and sold as Sil-O-Cel C-3, and a binder. The judge allowed a permanent injunction to issue against the defendant company.

* * *

International Derrick & Equipment Co. is calling attention to the fact that in a recent oil fire in the Huntington Beach, Cal., field, an Ideco galvanized steel derrick withstood the flames while wooden derricks all around it were destroyed. The only damage the steel derrick suffered was the burning of its wooden floors and wooden working platforms.

* * *

Wilson-Snyder, Pittsburgh, has put out bulletin W 178 C describing its "non-stop" pump. This is adapted to handling heavy Mexican crude as well as lighter oils. The pump is described and illustrated with photographs and line drawings.

Selden Truck Corporation, Rochester, N. Y., announces the following new dealers:

H. G. Pendell, Inc., 1253 S. Hoover St., Los Angeles.

G. G. White, 1523 Brandywine Ave., Philadelphia.

Wood's Auto Service Co. of 805 Pennsylvania Ave., Hagerstown, Md.

Harcourt Motor Co., 245 Broadway, Newburgh, N. Y.

Thomas Hillman of Mansfield, O. and W. E. Ellis of Findlay, O.

W. L. Poffinberger of Bellevue, O.

C. M. Thorpe with headquarters at Standard Supply & Equipment Co. has been appointed district sales manager in Philadelphia and surrounding territory.

* * *

General Carbonic Co., New York, has announced a new portable fire extinguisher said to be applicable in the oil industry, under the name of Fyre-Freez. It is designed to smother oil flames by a dense vapor of carbonic gas, at the same time cooling the burning mixture by particles of carbonic snow deposited on its surface.

* * *

National Clamp Co., 16 East 41st st., New York, is sending out to the trade descriptive literature of its new clamp for oil, gas, gasoline water and steam hose, in which the chief features claimed are simplicity and ease of fitting. The clamp is made in four sizes, one size fitting from one to one and three quarter-inch inside diameter.

The Right Way to Look at Aluminum Paint

THERE are two ways to look at Aluminum Paint. An outside look and an inside look.

If you look at the outside of an Aluminum Paint can and see that it is Metalsteel X-Brilliant Aluminum, you can be sure that inside you will find an Aluminum Paint that *is* brighter, *stays* brighter and lasts longer than any other aluminum paint.

Then, when you look at the outside of your tanks painted with Metalsteel X-Brilliant Aluminum, you will see why there is more tankage *protected* with Metalsteel Aluminum than any other Aluminum Paint made. Time tells the story of Metalsteel Aluminum—the pioneer Aluminum Paint used in every department of the oil

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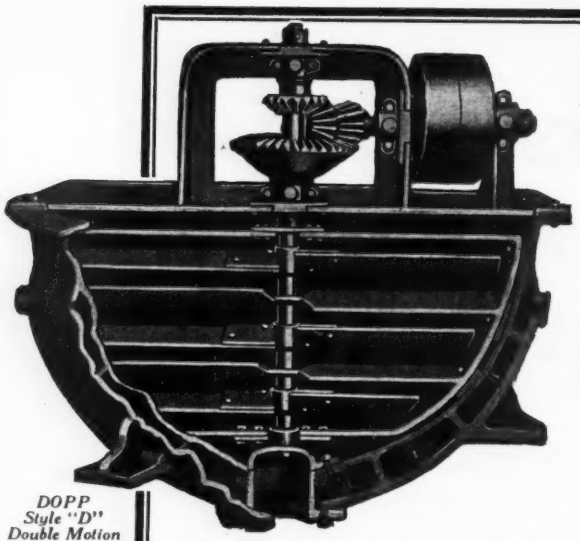

DOPP
Style "D"
Double Motion
MIXER
5 gals. to 1000 gals.

GREASE-MAKERS

Like This Mixer

They tell us it produces a better product, at lower cost, in less time.

No wonder we have received so many repeat orders!

A forged steel sweep with cross arms and adjustable steel scrapers, revolves in one direction. Cast iron paddles clamped to the center shaft revolve in the opposite direction *at twice the speed.* Mixes very rapidly and very thoroughly. The Kettle, of course, is a DOPP—seamless, therefore Leakless.

Learn more of this trouble-proof equipment by asking for Catalog No. 7, which fully describes:

DOPP SEAMLESS—LEAKLESS—JACKETED

KETTLES: 1 gallon to 1,000 gallons.
MIXERS: 16 different styles. 2 to 1,000 gallons.
SOAP CRUTCHERS: 1,000-4,500 lbs. capacity.
VACUUM AND PRESSURE PANS: 10-2,000 gallons.

Sowers Manufacturing Company
1305 Niagara St., Buffalo, N. Y.
New York Boston Toronto Montreal

ADOPT THE DOPP

DOPP SEAMLESS KETTLES

Staebler Oil Co. Merges With Two Marketers

ANN ARBOR, Mich., June 18.—The amalgamation recently of the Staebler-Kempf Oil Co., Staebler & Co. and the Staebler Oil Co. here, completed another step in the expansion of the old Staebler & Co., which first began its oil career in 1890. Staebler Oil Co. is one of the oldest Independent marketers in Michigan. Staebler-Kempf Oil Co., like many another successful oil company, started with one bulk plant and now has more than 20 outlets, distributing over 1,000,000 gallons of petroleum products annually.

The new corporation will operate as the Staebler Oil Co., with headquarters at 424 S. Main St. here. Paul R. Kempf, formerly manager of the Staebler Oil Co., will be sales manager of the new company, as well as secretary, and a director.

J. Fred Staebler is president, and Edward W. Staebler, mayor of Ann Arbor, is vice president.

Through this merger, the new company will own and operate three bulk plants, with 295,000 gallons storage, 11 service stations, and will supply 29 dealers with petroleum products. Distribution points at Ann Arbor, Ypsilanti, Saline, Brighton, Manchester, Clinton, Chelsea, Dexter, Whitmore Lake, South Lyon, New Hudson, Milan, Macon and other towns.

Seven trucks are in operation and 33 people are employed.

Foreign Opportunities

Reserved information may be obtained from the Bureau of Foreign and Domestic Commerce, Washington, and its district and cooperative offices by duly registered firms and individuals upon written request by opportunity number. The Bureau does not furnish credit ratings or assume responsibility as to the standing of foreign inquirers; the usual precautions should be taken in all cases, and where no references are offered it does not necessarily imply that satisfactory references could not be given. Correspondence may be in English unless otherwise stated.

25767.—**Lubricating oils,** Talca, Chile, agency.

25786.—**White, cream white and amber petrolatum, white oils,** Brussels, Belgium, purchase or agency.

25787.—**Gasoline, kerosene and lubricating oils,** St. John's, Newfoundland, purchase or agency.

25788.—**Gasoline, kerosene and lubricating oils,** Tananarive, Madagascar, agency.

25789.—**Gasoline and lubricating oils,** Santiago, Chile, agency.

25790.—**Gasoline and lubricating oils,** Antofagasta, Chile, agency.

25791.—**Lubricating oils, greases and tar,** Casablanca, Morocco, purchase.

25811—**Asphalt and petrolatum,** Prague, Czechoslovakia, agency.

25888.—**Paraffin wax and lubricating oils,** Stuttgart, Germany, purchase.

25908.—**Asphalt,** Stockholm, Sweden, purchase and agency.

New Stations Built or Being Built

Atlanta, Tex.—A. Wall is building service station.

Colorado, Tex.—Magnolia Petroleum Co. will build filling station.

Madill, Okla.—Marland Refining Co. plans to build filling station.

Little Rock, Ark.—Dr. S. Atkinson will build filling station.

Hot Springs, S. D.—J. J. Ashcroft, agent for the Pure Oil Co. here, will build filling station.

Albert Lea, Minn.—Mrs. Oscar C. Olson is completing filling station.

Bismarck, N. D.—W. F. Wherland and O. A. Engerbretson building filling station.

Shawnee, Okla.—A. J. Haney, Haney Oil Co., is completing service station.

Lebanon, Mo.—Standard Oil Co. of Indiana will erect two service stations.

York, Pa.—Joseph W. Amsbaugh will build filling station.

Lafayette, Minn.—Lafayette Oil Co. is completing service station.

Houston, Tex.—F. A. Krenzler is completing filling station.

Chicago, Ill.—Westwood Oil Co. will build two filling stations.

Higginsville, Mo.—Will Oliver is building filling station.

Zanesville, O.—T. A. McIntire is erecting service station.

Kenton, O.—Hardin County Oil Co. is building filling station.

Marysville, O.—Marysville Oil Products Co. is building filling station.

Stroud, Okla.—Marland Refining Co. will build filling station.

McKinney, Tex.—Magnolia Petroleum Co. is erecting service station.

Langdon, N. D.—Standard Oil Co. of Indiana is building filling station.

Winnebago, Minn.—W. G. and Frank Leeman erecting filling station.

Crookston, Minn.—Cities Service Oil Co. is completing service station.

Hazleton, Pa.—Fred Lenhardt & Sons plan to build service station.

Aitkin, Minn.—I. D. Codner completing service station.

Erie, Pa.—Parent Oil Co. will build filling station.

Marysville, Kan.—Fenwick Oil Co. is completing filling station.

Worthington, Mo.—Willie Casady is erecting service station.

Cape Girardeau, Mo.—J. R. Erwin will build filling station.

Sabetha, Kan.—R. J. Courter to build service station.

Harrison, Ark.—Magnolia Petroleum Co. and M. F. Franklin and Karl Greenhaw are completing service stations.

Elkins, W. V.—George Henry will build filling station.

Mamaroneck, N. Y.—Sound view Holding Corp. will build service station.

St. Marys, W. Va.—Julian Stanley will erect service station.

Albany, N. Y.—Buffalo Grey Auto Co. is building filling station.

El Reno, Okla.—D. L. Filkins will build filling station.

MILWAUKEE

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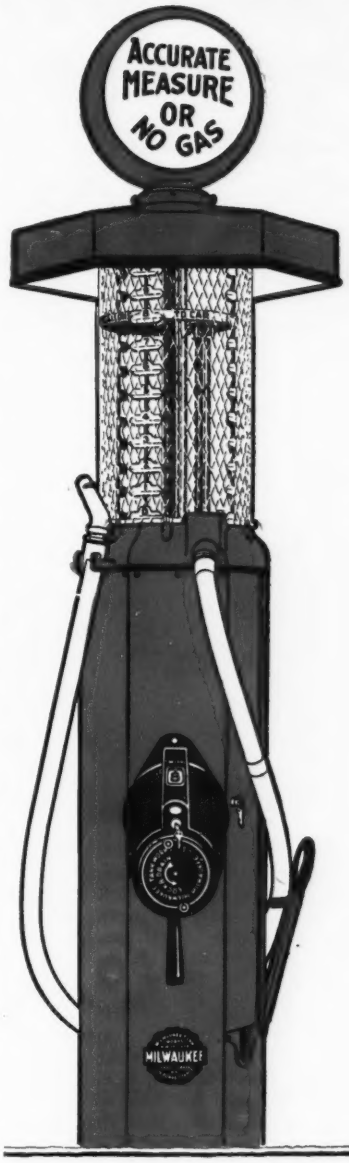

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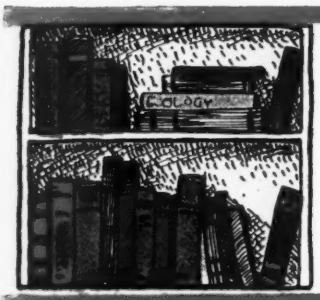

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Every successful business is constantly on the lookout to improve its machinery and methods.

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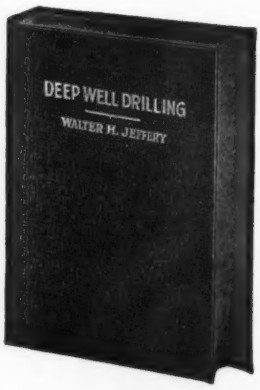

The second edition of "Deep Well Drilling" by Walter H. Jeffery is just out. The material in the first edition has been rewritten thruout with several new chapters on improvements in the art of drilling.

"Deep Well Drilling" discusses exhaustively cable tool drilling, rotary drilling, core drilling in all their phases; tells how to fish for lost tools; how to case, how to use packers, how to cement and how to shoot; how to plan operations intelligently; specify material, etc.

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Employees or heads of refineries in charge of, or planning to extend their plants, will find in this book valuable technical data on the latest design and operation of refineries.

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ON THE LAZY BENCH

National Petroleum News

He Knew What He Wanted

A Wichita Falls district driller outfitted his office with a forty-five dollar desk and a two hundred dollar chair to go with it. The office supply salesman first showed some expensively carved pure mahogany desks selling around two thousand dollars. They had been selected from the stock of one of America's leading furniture makers and were brought to Wichita Falls during one of the boom periods.

The driller didn't pay them any attention, but asked for something around forty dollars. He selected a cheap desk at this price and then asked for a chair to go with it. The salesman, just down from the East, picked out a seven dollar chair.

"I want a good chair," said the driller, and ended up by selecting a handsome one, deep seated and with elaborately carved legs. The price was two hundred dollars. The salesman, seeing he had money, then tried to sell a better desk, arguing that the cheap one would look badly with the handsome chair.

"No," said the driller, "I have got what I want. I want a desk I can throw my feet up on, lay burning cigarettes on and possibly spill a little liquid on it now and then without any great damage being done. And then when I get in from the field tired and played out I want a good chair to put myself in. Here's the money. Send those things on over to my office."

—Herk U Lee's Log Book

* * *

The minister called at the Jones home one Sunday afternoon and little Willie answered the bell.

"Pa ain't home," he announced. "He went over to the golf club."

The minister's brow darkened, and Willie hastened to explain:

"Oh, he ain't gonna play any golf. Not on Sunday. He just went over for a few highballs and a little stud poker."

—The Oil Can.

* * *

Passenger: "Mr. Conductaire—I no speek Engleesh ver' well. Explain, please, what means your orders to motorman? You says slow up—he says I have already slowed down."

Conductor: "That's because the car in front is behind and we're ahead."

Passenger: "I give up. I will nevair learn ze Engleesh."

—Standard Gasoline Booster.

Knows The Ropes

Lady Passenger—"Could I see the captain?"

First Mate—"He's forward, Miss."

Lady Passenger—"I'm not afraid. I've been out with college boys."

—Standard Gasoline Booster.

* * *

Judge: What have you to say for sassing the traffic cop?

Prisoner: I wish I was where there are no traffic cops to sass.

Judge: Your wish granted; thirty days.

—Standard Gasoline Booster.

* * *

New Popular Song

Voice Over Phone—"How much is coal now?"

Dealer—"Eighteen-ninety a ton."

Voice Over Phone—"Ha ha! I gotta oil burner."

—Standard Gasoline Booster.

* * *

Use Tact to Keep Intact

Kid Frosh: "What is tact?"

Prof.: "My boy, if you tell a girl that time stands still when you look into her eyes, that's tact. But if you tell her that her face would stop a clock, look out."

—Atlantic Seal

* * *

A certain Scotchman is worried over the fact that the price of gasoline has not been reduced in keeping with the lowering of the price of crude. This gentleman does not own an auto but does possess a patent cigar lighter.

—Bridgeport Driller.

* * *

Something Different

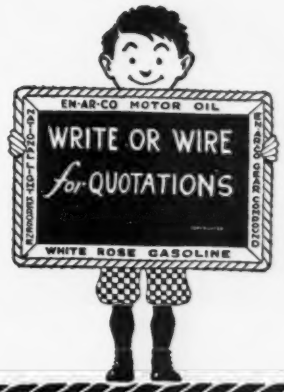
Uncle Eb Tully had sold his eggs and dropped into the Greasy Spoon for a lunch. "Tea or coffee," asked the waitress. "Well," said Uncle Eb, "if what you give me last time I eat here was tea, I'll take coffee, an' if it was coffee I'll take tea—jes' so it's somethin' diff'rent."—*Sun Oil Co.*

* * *

A Powerful Sermon

A colored minister in Louisville announced to his faithful flock the following: "Brethren and sistern, dis mornin' I's gwine to preach a powerful sermon, I'se gwine to define the undefinable; I'se gwine to unscrew the unscrutable, and I'se gwine to lead you all through de impassable paths to infernal happiness."

—Pure Oil News.



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THREE MODERN REFINERIES:
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364—A very complete and practical folio made from heavy 5-oz. black cowhide. 3¼-inch pocket that holds leather handled bottle fold. Contains sixteen 4-oz. plain bottles. One-inch pocket for stationery. Leather case containing six ½ oz. jars $3.25 additional.

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614 Delaware Kansas City, Mo.

Canfield

SELLING the "smokestack trade"? Here are a few of your prospects—and this is about what you would find in any one of scores of industrial centers, nation-wide, if you were to go up and look down!

But no matter what the angle from which you see them, you can well say to yourself:

"All those factories use machinery. Every piece of machinery must be kept well oiled and greased.

"More factories, more machines: more machines, more lubricant—thousands and thousands of gallons bought every month."

Of course you'll have to *fight* for that business—just as you do for everything worth-while these days. The main thing is that the business is to be had, and it's worth going after.

Prompt, specialized, quality lubrication service will win and hold this "smokestack business" for you.

Canfield's full line and facilities will help you to control your share of this huge industrial volume. Canfield's complete laboratory service—the steady, dependable quality of Canfield products—Canfield's own tank lines, assorted carload lots, and unsurpassed delivery facilities—will help you show an extra profit.

Why not see how Canfield Industrials will strengthen your line-up? There's a handy list at the right. Check the items of interest—let us send you samples—then you be the judge.

Spot Gasoline Trade Slackens but Mid-Continent Prices Hold Well

Staff Special
TULSA, June 18.

A SMALL export gasoline purchase in north Texas, a comparatively steady demand and movement of domestic grades of gasoline, and small price recessions in kerosenes and natural gasolines furnished the major interests in the Mid-Continent refinery market this week.

The usual mid-month lull was being felt today, but not sufficiently to cause any concern as yet. Weather was being blamed again for a large part of whatever let-up there was in jobber buying. The weather apparently is always blamed for any let-up in orders, unless there is some other good excuse handy.

This time the weather probably has had some effect, but how much is problematical. Early this week cool weather blew into the Mid-Continent area from the north, and in Tulsa for two days a top coat would have been comfortable. Reports were that snow had fallen in western Kansas.

Despite the weather, gasoline business has been considerably better so far this month than it was for the corresponding part of last month. With only a few exceptions, Oklahoma refiners report daily spot sales have been as good the first half of the month as in all of May. Others are far ahead of their sales for the same period last month. The total sales for the first 15 days of June are not far below the total for all of May.

In the first few days of May sales were heavy, then began to taper off considerably. The sales the first few days of June were also heavy, and they have not shown near the fall so far.

With spot business in such a position, there is every reason to believe contract shipments have been approximately normal if not a little above. This situation probably accounts in a large measure for the fact that a comparatively small volume of gasoline has been pushed on the market this week.

Late this week one Oklahoma refiner sold a sizable quantity of 58-50 U. S. Motor at 6.50 cents a gallon to a broker. This refiner has been holding his price at 6.75 cents and immediately put his quotations back to that figure both to brokers and jobbers after closing the quantity deal.

Three or four Oklahoma refiners began the week with 6.75 to 7-cent quotations on U. S. Motor, but as the week progressed all of them with the exception of one large company put their quotations down to 6.75 cents. Other refiners also were quoting that figure throughout the week, while in a few spots 6.625 cent quotations were out.

Refiners who have been making goods of lower gravity than 58-60 U. S. Motor, or gasoline with a higher end point, report business in those grades has picked up considerably this month. North Texas refiners are finding the demand considerably better with them, and there apparently is little 56-58, 58-60, 450 e. p. gasolines available in that area at present.

High gravity gasolines are in little demand at present. Approximately 250,000 gallons of 64-66, 375 e. p. gasoline was sold early in the week by a north Texas refiner to an exporter at 6.875 cents a gallon f. o. b. refinery.

THERE has been little active buying of natural gasoline so far this month. One large manufacturer whose major orders call for Grade C. sometimes has his plants make a quantity of Grade AA with which he does considerable trading in the course of a month.

Soon after June 1, however, he saw Grade AA price slipping down to the Grade BB and Grade C prices so he ordered his plants to swing back to Grade C. He has been doing little active trading or buying, therefore, and with only routine orders from other sources, manufacturers have been unable to keep the prices from easing off as distress goods appeared. All grades of naturals today were 0.25 to 0.50 cent lower than they were a week ago.

Kerosenes are virtually 0.125 cent lower than last Saturday. One or two refiners reported during the week that they were getting a fair volume of orders, in some instances at prices as high as 4.50 cents a gallon for 41-43 water white, but most refiners said their kerosene orders were scarce, and that they did not look for any active buying for the next month or six weeks.

North Texas refiners have been making more kerosene than they could move readily with the result that they have been slightly under Group 3 on prices this week. This probably accounted to a certain extent for the easing off in price in Group 3. Arkansas and north Louisiana refiners have not been making much kerosene of late, and prices accordingly have been firmer than they have been in the other areas.

There has been little activity in distillates the last two or three weeks. It is a little too early for buyers to begin to make distillate contracts for this winter. One or two contracts have been reported, however, the price in one being at a minimum of 3.25 cents a gallon for 38-40 straw goods, and another at around 4.50 cents a gallon for delivery during the winter.

Gas oil has remained at 2.50 to 2.625 cents about all the week. Several refiners that have cracking units, are reported to be storing their gas oil for this winter, while others are said to be buying for storage any of the commodity appearing around 2.50 cents. One refiner bought 10,000 barrels this week from a neighboring refiner, where piping only was necessary to move the goods, at 2.50 cents a gallon.

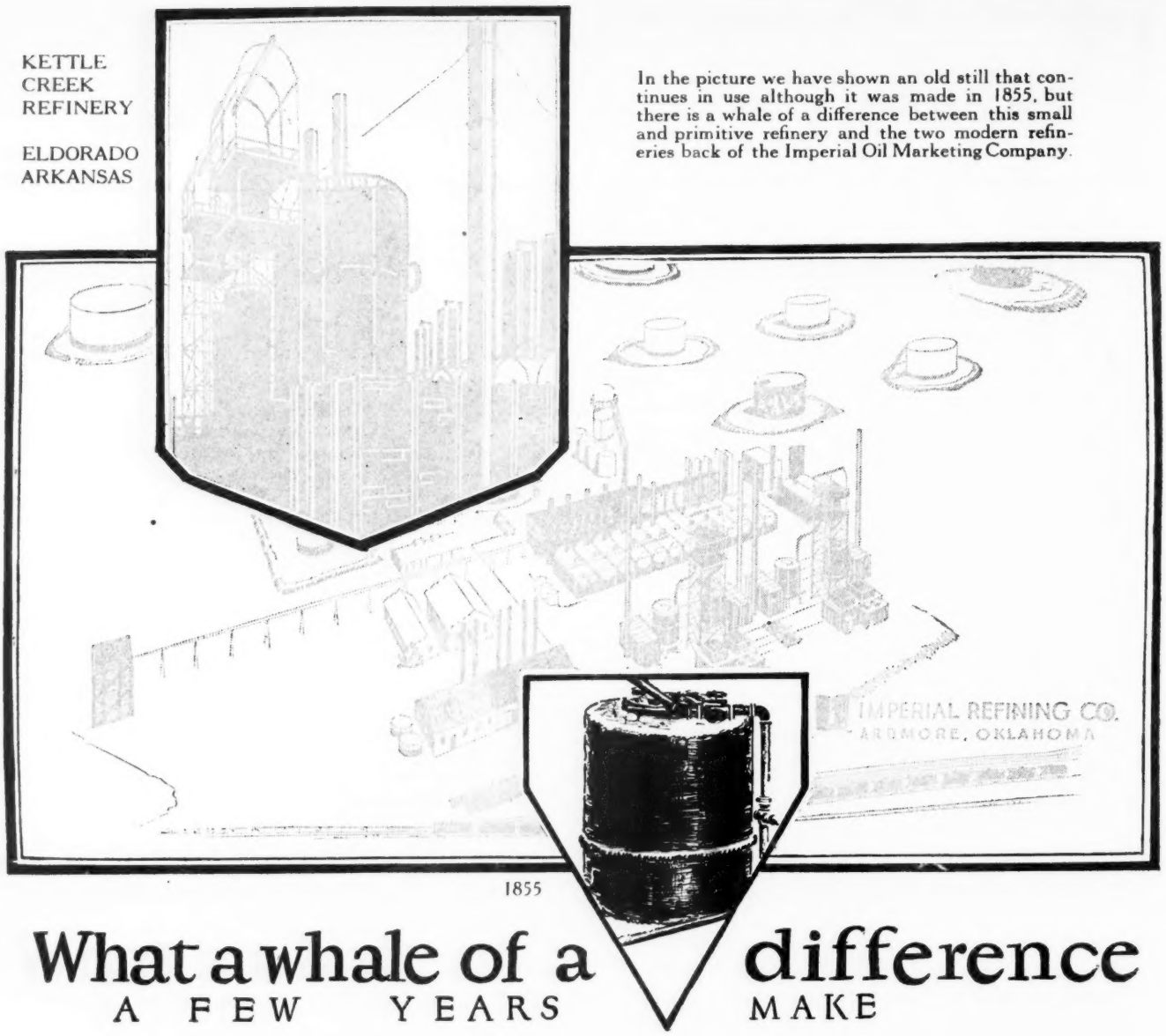
The rice field pumping season has begun in Arkansas, and Louisiana and Arkansas refiners are busy making contracts or supplying buyers with gas oil. The market is in a relatively good position in that area at present, despite the fact that the floods in April cut into the gas oil business considerably in the Mississippi river valley outside of Arkansas.

FUEL oils have been holding their own well this month. There have been only slight changes in prices this week, while inquiries have been numerous. Some of the inquiries are for over the remainder of the year, while others have been on a monthly basis. Virtually no distress fuel oil has been reported for some time.

Oklahoma refiners who make both neutrals and cylinder stocks reported

KETTLE
CREEK
REFINERY

ELDORADO
ARKANSAS



In the picture we have shown an old still that continues in use although it was made in 1855, but there is a whale of a difference between this small and primitive refinery and the two modern refineries back of the Imperial Oil Marketing Company.

1855

What a whale of a difference

A FEW YEARS MAKE

The Imperial refining Company at Ardmore, Oklahoma, produces for you a high-quality gasoline made from Southern Oklahoma crude oil, and the Kettle Creek Refinery at El Dorado, Arkansas, produces a high-quality, water-white, anti-knock gasoline cracked from the famed Arkansas crude.

These two refineries support the Imperial Oil Marketing Company, ready to render to you an independent service with the high-quality product which you are entitled to.

We offer you a line of gasolines unexcelled in quality, noted for their anti-knock virtues, maintained at definite specifications, and at ordinary gasoline prices.

Write us for specifications or information.

Special Offering
Imperial Furnace Distillate

Acid treated—highly efficient—shipments upon telegraphic notice.

Specifications

Gravity	38/40
Flash	175/180 F.
Color	Light straw
Sulphur	Less ½ of 1%
Cold Test	Below zero
Odor	Sweet

IMPERIAL REFINING CO.
ARDMORE, OKLA.

KETTLE CREEK REFINING CO.
ELDORADO, ARKANSAS

All sales handled through our own sales division

IMPERIAL OIL MARKETING CO.
ATLAS LIFE BUILDING
TULSA, OKLAHOMA

We maintain no bulk or retail stations. We are refiners and distributors to the independent jobber

Refinery Markets on Light Oils and Lubricants

Prices given below are in cents per gallon, F. O. B. refinery, except where $ sign is shown

(These Refinery Prices compiled in the OIL PRICE HANDBOOK for a whole year)

GASOLINE AND NAPHTHA

PENNSYLVANIA	Prices June 20	Prices June 13	Prices June 6
52-54 Naphtha	9.00 – 9.50	8.75 – 9.50	8.75 – 9.50
54-56 Naphtha	9.00 – 9.50	8.75 – 9.50	8.75 – 9.50
58-60 Gasoline	9.00 – 9.25	9.00 – 9.25	8.75 – 9.25
60-62 Str.-run gasoline	9.25 –10.00	9.25 –10.50	9.50 –10.50
64-66 Str.-run gasoline	10.00 –10.50	10.00 –10.50	10.00
68-70 Str-run gas. 350-360 e.p.	10.50 –11.00	10.50 –11.50	10.75 –12.00
68-70 Str-run gas. 305-320 e.p.		15.00 –18.00	17.00 –18.00
OKLAHOMA			
48-50 450 e.p. naphtha	6.50	6.50	6.50
50-52 450 e.p. naphtha	6.50	6.50	6.50
56-58 450 e.p. gasoline	6.50	†6.50	† 6.50
56-58 U. S. Motor, 437 e.p.	††6.50 – 6.625	††6.50	†† 6.50
58-60 450 e.p. gasoline	6.50 – 6.625	6.50 – 6.625	6.50
58-60 U. S. Motor, 437 e.p.	6.625– 7.00	6.625– 7.00	6.50 – 7.00
60-62 437 e.p. gasoline	6.75 – 7.125	6.625– 7.125	6.625– 7.125
60-62 400 e.p. gasoline	**6.875– 7.50	†6.875– 7.625	†7.00– 7.25
64-66 390 e.p. gasoline	**7.00 – 7.50	†7.00 – 7.25	†7.00– 7.25
64-66 375 e.p. gasoline	**7.25 – 7.75	†7.25 – 7.75	†7.25– 7.50
68-70 350-360 e.p. gasoline	**7.50 – 8.00	†7.50 – 8.00	7.50 – 7.75
KANSAS (F. O. B. refinery Kansas destination)			
58-60 U. S. Motor 437 e.p.	7.00 – 7.25	7.00 – 7.25	7.00 – 7.25
60-62 400 e.p. gasoline	7.25 – 7.50	7.25 – 7.50	7.25 – 7.50
64-66 375 e.p. gasoline	7.50 – 7.75	7.50 – 7.75	7.50 – 7.75
NORTH TEXAS			
48-52 450 e.p. naphtha	†6.25	†6.25	†6.25
56-58 450 e.p. gasoline	†6.25	†6.25	†6.25
58-60 450 e.p. gasoline	6.25 – 6.375	6.25 – 6.375	6.25
56-58 U. S. Motor 437 e.p.	††6.25	††6.25	††6.25
58-60 U. S. Motor 437 e.p.	6.50	6.50	6.50
60-62 400 e.p. gasoline	6.75 – 6.875	....	....
64-66 375 e.p. gasoline	7.00	7.00	7.00
68-70 350-360 e.p. gasoline	*7.25 – 7.50	†7.25 – 7.50	*7.25 – 7.50
NORTH LOUISIANA (For Louisiana and differential territory destination)			
56-58 U. S. Motor gasoline	7.00	7.00	6.75 – 6.875
ARKANSAS (For Arkansas intrastate shipment)			
56-58 450 e.p. gasoline	6.75 – 7.00	6.75 – 7.00	– 6.75
58-60 450 e.p. gasoline	6.75 – 7.00	6.75 – 7.00	– 6.75
58-60 U. S. Motor 437 e.p.	7.125– 7.50	7.125– 7.50	7.00 – 7.50
ARKANSAS (F. O. B. Arkansas refineries for interstate shipment)			
58-60 U. S. Motor 437 e.p.	6.75 – 7.00	6.75 – 7.00	6.75 – 6.875
CALIFORNIA			
*54-58 U.S. Motor 437 e.p.	8.00 – 9.00	8.00 – 9.00	7.50 – 8.50
*58-61 U.S. Motor 437 e.p.	8.50 – 9.50	8.50 – 9.50	8.50 – 9.50
*42-45 Eng. dis. 445-480 e.p.	6.00 – 7.00	6.00 – 7.00	6.00 – 7.00
*2c tax to be added if used in state.			
NEW ENGLAND			
58-60 U. S. Motor gas	9.85	–10.00	–10.08

NATURAL GASOLINE

(Note: End point of all grades, not over 375° F.)

OKLAHOMA			
Grade AA, 80-87.9, 90% Recovery	4.75	5.00– 5.25	5.50
Grade A, 72-79.9, 90% Recovery	4.75	5.00– 5.25	5.50
Grade BB, 84-92, 85% Recovery	**4.50 – 4.75	5.00	5.25 – 5.375
Grade B, 76-83.9, 85% Recovery	**4.50 – 4.75	5.00	5.25 – 5.375
Grade C, 80-90, 78% Recovery	**4.50 – 4.75	† 5.00	†5.125– 5.25
NORTH TEXAS (F. O. B. Breckenridge)			
Grade AA, 80-87.9, 90% Recovery	4.75	5.00– 5.25	5.50
Grade A, 72-79.9, 90% Recovery	4.75	5.00– 5.25	5.50
Grade BB, 84-92, 85% Recovery	†4.50 – 4.75	5.00	5.25 – 5.375
Grade B, 76-83.9, 85% Recovery	†4.50 – 4.75	5.00	5.25 – 5.375
Grade C, 80-90, 78% Recovery	†4.50 – 4.75	†5.00	†5.125– 5.25
NORTH LOUISIANA (F. O. B. Monroe District)			
Grade AA	†5.25	5.625– 5.75	† 5.75
Grade BB	†5.00 – 5.25	†5.50 – 5.625	† 5.50
Grade C	†5.00 – 5.25	†5.50	† 5.25
CALIFORNIA			
75-85, 375-390 e.p. blend	6.00 – 8.00	6.00 – 8.00	6.00 – 8.00

MOTOR FUEL BLENDS

PENNSYLVANIA			
68-70 Blend 437 e.p.	9.00 – 9.50	9.00 – 9.50	9.00 – 9.50
64-66 Blend 437 e.p.	8.75 – 9.50	8.75 – 9.50	8.75 – 9.50
60-62 Blend 437 e.p.	8.75 – 9.50	8.75 – 9.50	8.75 – 9.50
OKLAHOMA			
64-66 Blend 437 e.p.	6.125– 6.25	6.25	6.25

BURNING OILS

PENNSYLVANIA			
45 w.w. kerosene	6.25 – 6.625	6.50 – 6.75	6.50 – 6.75
46 w.w. kerosene	6.50 – 7.00	6.75 – 7.00	6.75 – 7.00
47 w.w. kerosene	7.00 – 7.25	7.25 – 7.50	7.25 – 7.50
OKLAHOMA			
41-43 w.w. kerosene	4.00 – 4.25	4.125–4.375	4.375– 4.50
42-44 w.w. kerosene	4.375– 4.50	4.50 – 4.75	4.625– 4.75
KANSAS (F. O. B. refinery Kansas destination)			
41-43 w.w. kerosene	5.25	5.25	5.25 – 5.50
42-44 w.w. kerosene	5.50	5.50	5.50 – 5.75
NORTH TEXAS			
40-42 w.w. kerosene	†3.75	3.875	4.00
41-43 w.w. kerosene	3.75 – 4.00	4.00	4.25
NORTH LOUISIANA (For Louisiana and differential territory destination)			
41-43 w.w. kerosene	†4.50 – 5.00	4.50 – 4.75	4.75
ARKANSAS (For intrastate shipment only)			
41-43 w.w. kerosene	4.50 – 4.625	4.625– 4.75	4.75
42-44 w.w. kerosene	4.75 – 4.875	4.875– 5.00	5.00
ARKANSAS (F. O. B. Arkansas refineries for interstate shipment)			
41-43 w.w. kerosene	4.50	4.50 – 4.625	4.50 – 4.75
42-44 w.w. kerosene	4.625	4.625– 4.75	4.75 – 5.00
CALIFORNIA			
38-40 w.w. kerosene	5.50 – 6.00	5.50 – 6.00	5.50 – 6.00
NEW ENGLAND			
40-43 w.w. kerosene	††7.50	††7.50	††7.50

NEUTRAL OIL

PENNSYLVANIA Vis.	Prices June 20 (Viscosity at 70°F.)	Prices June 13	Price June 6
200 No. 3 Assoc. Filt.	34.50 –35.00	34.50 –35.00	34.00 –34.50
180 No. 3 Assoc. Filt.	31.00 –32.00	31.00 –32.00	30.50 –32.00
150 No. 3 Assoc. Filt.	27.75 –28.75	28.00 –28.50	28.00 –28.50
	(Non Viscous)		
34 Grav. 330-340 Flash	7.00 – 7.75	7.00 – 7.75	7.00 – 7.75
36 Min. Neut. 300-305 Flash	6.50 – 7.25	6.50 – 7.25	6.50 – 7.50
OKLAHOMA			
Vis. Color	(Viscosity at 100°F.)		
100—No. 2	6.00 – 7.50	6.00 – 7.50	6.00 – 7.50
150—No. 3	8.50 – 8.75	8.50 – 8.75	8.50 – 8.75
150—No. 4	8.25 – 8.50	8.25 – 8.50	8.25 – 8.50
180—No. 3	9.50 –10.25	9.50 –10.25	9.50 –10.25
180—No. 4	9.75	9.75	9.75
180—No. 5	9.50 – 9.75	9.50 – 9.75	9.50 – 9.75
200—No. 3	10.00 –11.00	10.00 –11.00	10.00 –11.00
200—No. 4	10.50 –10.75	10.50 –10.75	10.50 –10.75
200—No. 5	9.00 –10.50	9.00 –10.50	9.00 –10.50
220—No. 3	12.50 –13.50	12.50 –13.50	12.50 –13.50
220—No. 4	12.25 –12.50	12.25 –12.50	12.25 –12.50
220—No. 5	11.50 –12.00	11.50 –12.00	11.50 –12.00
240—No. 3	14.00 –15.00	14.00 –15.00	14.00 –15.00
240—No. 4	13.50	13.50	13.50
240—No. 5	12.00 –13.00	12.00 –13.00	12.00 –13.00
280—No. 3	16.00 –17.00	16.00 –17.00	16.00 –17.00
280—No. 4	15.25	15.25	15.25
280—No. 5	14.00 –15.00	14.00 –15.00	14.00 –15.00
300—No. 5-6	17.00	17.00	17.00
GULF COASTAL			
Vis. Color	(Viscosity at 100° F., pour test 0)		
100—No. 2 Unfilt. Pale	7.00 – 7.50	7.00 – 7.50	7.00 – 8.00
200—No. 3 Unfilt. Pale	10.50 –11.00	10.50 –11.00	10.50 –11.00
300—No. 3 Unfilt. Pale	11.50 –12.00	11.50 –12.00	11.50 –12.00
500—No. 3½ Unfilt. Pale	13.50 –14.00	13.50 –14.00	13.50 –14.00
750—No. 4 Unfilt. Pale	16.00 –16.50	16.00 –16.50	16.00 –16.50
200—No. 5½ Red Oil	8.50 – 9.00	8.50 – 9.00	8.50 – 9.50
300—No. 5½ Red Oil	10.00 –10.50	10.00 –10.50	10.00 –11.00
500—No. 6 Red Oil	11.50 –12.00	11.50 –12.00	11.50 –12.50
750—No. 6 Red Oil	14.50 –15.00	14.50 –15.00	14.50 –15.50
CALIFORNIA			
Vis. Color	(Viscosity at 100°F.)		
100—No. 2	9.00 – 9.50	9.00 – 9.50	9.00 – 9.50
100—No. 3	7.50 – 8.00	7.50 – 8.00	7.50 – 8.00
200—No. 3	9.50 –10.00	9.50 –10.00	9.50 –10.00
300—No. 3	10.50 –11.00	10.50 –11.00	10.50 –11.00
450—No. 3-3½	13.00 –13.50	13.00 –13.50	13.00 –13.50
550—No. 3-3½	14.50 –15.00	14.50 –15.00	14.50 –15.00
600—No. 3-3½	15.00 –15.50	15.00 –15.50	15.00 –15.50
100—No. 5	6.50	6.50	6.50
200—No. 5	8.00 – 8.50	8.00 – 8.50	8.00 – 8.50
300—No. 5	9.00 – 9.50	9.00 – 9.50	9.00 – 9.50
400—No. 5	11.00 –11.50	11.00 –11.50	11.00 –11.50
500—No. 5	11.00 –11.50	11.00 –11.50	11.00 –11.50
600—No. 5	12.00 –12.50	12.00 –12.50	12.00 –12.50
700—No. 7	14.00 –14.50	14.00 –14.50	14.00 –14.50

CYLINDER STOCKS

OKLAHOMA			
190-200 Vis. at 210° Brt. St.	31.00 –32.00	31.00 –32.00	31.00 –32.00
150-160 Vis. at 210° Brt. St.	26.00 –28.00	26.00 –28.00	26.00 –28.00
600 E St. 140-150 Vis.-210°	17.00 –18.00	17.00 –18.00	17.00 –18.00
600 St. Ref. Olive Green	9.00 –10.00	9.00 –10.00	9.00 –10.00
600 St. Ref. Dark Green	7.00 – 8.00	7.00 – 8.00	7.00 – 8.00
Black Oil	5.00	5.00	5.00
PENNSYLVANIA	(1-inch Immersion Test)		
600 Steam Refined	8.75 – 9.75	9.00 – 9.50	9.00 –10.25
650 Steam Refined	11.50 –12.50	11.50 –12.50	11.00 –12.50
600 Flash	17.00 –18.00	17.00 –18.00	17.00 –18.00
625 Flash	26.00 –29.00	26.00 –29.00	27.00 –29.00
600 Warren E	18.00 –19.00	19.00 –20.00	18.00 –20.00
600 Oil City E	17.50 –18.25	17.50 –18.25	17.00 –18.00
600 D Filtered	25.50 –26.00	25.50 –26.00	25.00 –26.00
Cold Test Stocks (brt. filt.)	33.00 –34.00	33.50 –34.00	33.00 –34.00
Cold Test Stock (dark filt.)	31.00 –32.00	31.50 –32.00	31.00 –32.00

(Note—Prices of total immersion test goods average 1 to 3 cents per gallon higher)

LONG RESIDUUM STOCKS

PENNSYLVANIA			
60-65 vis. @ 210, 440-450 flash No. 5½ color	33.50	33.50	33.50
70-75 vis. @ 210, 450-455 flash No. 6 color	34.00 –34.50	34.00 –34.50	34.00 –34.50
80-85 vis. @ 210, 440-450 flash No. 7 color	36.00	36.00	36.00
80-85 vis. @ 210, 450-460 flash No. 7-8 color	36.50	36.50	36.50
80-85 vis. @ 210, 460-465 flash No. 7 color	37.00	37.00	37.00
95-100 vis. @ 210, 490-495 flash No. 8 color	38.50	38.50	38.50

†PRICES NOMINAL ††ONLY ONE REFINER QUOTING *QUOTATION ONLY **REPRESENTS BOTH SALES AND QUOTATIONS

W. M. WELCH. *President,* White Oak Refining Company

wishes to announce that the Allen refinery of White Oak Refining Company commenced running Seminole crude on June 15th.

The company is now in a position to make deliveries on a volume basis.

The White Oak Refining Company can assure performance under its commitments, having contracted with one of the largest of the Seminole producing companies, for a sufficient supply of fresh Seminole crude. It has its own pipe line direct from the Bowlegs District of the Seminole Pool to the refinery.

The Company is in a position to make prompt deliveries also, having contracted with one of the largest tank car lines for its tank car requirements.

To assure exact compliance with specifications, personal supervision of all shipments is given by the Refinery Manager and Superintendent, Mr. R. L. Walde, until recently in charge of the Interocean Oil Company's refinery at Bristow, Oklahoma.

Mr. Welch trusts to renew his favorable acquaintance with tank car purchasers of petroleum products by the establishment of mutually desirable and advantageous relations.

The Allen refinery has been completely rebuilt and modern fractioning equipment has been added, thus assuring high grade products of uniform quality and continuous output.

All grades of gasoline, kerosene, tractor fuel, gas oil, and fuel oil will be made.

Inquiries are respectfully solicited

WHITE OAK REFINING COMPANY

617 World Bldg. Tulsa, Okla.

Refinery, Allen, Okla. (Group 3) on K. O. & G. R. R.

BULK LUBRICATING OIL EQUIPMENT

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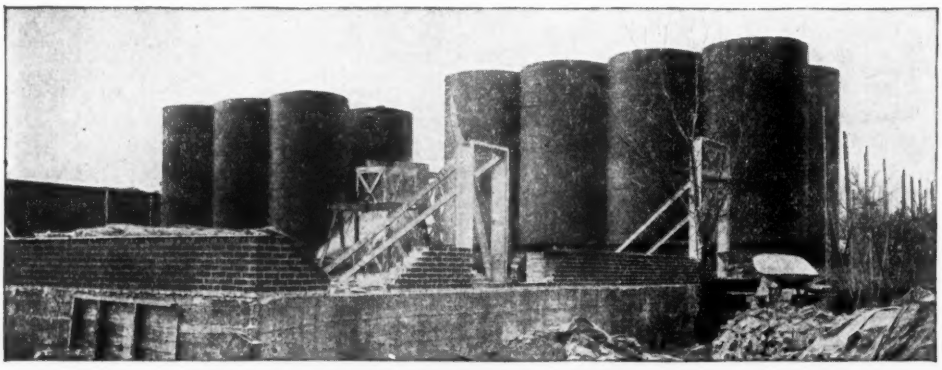

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Check Items on which you want prices.

Complete Bulk Station ..... Number of Tanks ..... Size .....
Filling Station Tanks ..... Size ..... Pumps .....
Truck Tanks ..... Size ..... Compts .....
Other Equipment .....
Name ..... Address .....

Refinery Markets on Wax and Heavy Oil Products

Prices given below are in cents per gallon, F. O. B. refinery, except where $ sign is shown

(For quick reference to Refinery prices, get the OIL PRICE HANDBOOK, published annually)

WAX

	Prices June 20	Prices June 13	Prices June 6
***PENNSYLVANIA**			
122-124 white crude scale.	2.875– 3.00	3.125 – 3.25	3.00 – 3.25
124-126 white crude scale.	2.875– 3.00	3.125 – 3.25	3.00 – 3.25
*Per Pound, New York			
OKLAHOMA			
*124-126 white crude scale, per pound	2.375– 2.625	2.25 – 2.50	2.25 – 2.50
*Represents quotations and sales.			
CALIFORNIA			
White crude scale, per pound	6.00 – 7.00	6.00 – 7.00	6.00 – 7.00

FUEL OIL

PENNSYLVANIA			
36-40 fuel oil	4.50 – 4.75	4.75 – 5.00	4.50 – 5.00
30-34 fuel oil	4.75 – 5.00	4.75 – 5.00	4.50 – 5.00
28-32 fuel oil	4.75 – 5.00	4.75 – 5.00	4.50 – 5.00
OKLAHOMA			
38-40 straw distillate	3.25	3.125– 3.25	3.25
36-38 straw distillate	3.00	3.00	3.00
32-36 gas oil, cracked	2.625	2.625	2.625
32-36 gas oil, str. reduced	2.625	2.625– 2.75	2.75
28-30 fuel oil (in bbls.)	$0.95 –$1.00	$0.95	$0.975–$1 025
26-28 fuel oil (in bbls.)	$0.95	$0.95	$0.95
24-26 fuel oil (in bbls.)	*$0.90	†$0.90	†$0.925–$0.95
22-26 fuel oil (in obls.)	*$0.90	†$0.90	†$0.925–$0.95
18-22 fuel oil (in bbls.)	$0.90	$0.90	$0.90 –$0.925
16-18 fuel oil (in bbls.)	*$0.85	†$0.85	†$0.85 –$0.875
14-16 fuel oil (in bbls.)	$0.85	†$0.85	$0.85
†Prices nominal. *Represents Sales and Quotations.			
KANSAS (F. O. B. refinery Kansas destination.)			
38-40 straw distillate	3.50 – 3.75	3.75	3.75
36-38 straw distillate	3.25	3.25	3.25
32-36 gas oil	2.75	2.75 – 3.00	2.75 – 3.00
24-26 fuel oil	*$1.05 –$1.10	*$1.05 –$1.10	*–$1.10
18-22 fuel oil	*$0.95 –$1.00	*$0.95 –$1.00	*–$1.00
*Quotations only.			
NORTH TEXAS			
38-40 straw distillate	3.00	3.00	3.00 – 3.125
32-36 gas oil, cracked	2.50	2.50 – 2.625	2.50 – 2.625
32-36 gas oil, uncracked	2.625	2.625	2.625
24-26 fuel oil (in bbls.)	$0.875 –$0.90	$0.85–$0.875	$0.85 –$0.95

GULF COASTAL	Prices June 20	Prices June 13	Price June 6
Fuel (in bbls.)	$1.60 –$1.65	$1.60 –$1.65	$1.60 –$1.65
Gas oil	4.50 – 4.75	4.50 – 4.75	4.50 – 4.75
NORTH LOUISIANA (For Louisiana and differential territory destination)			
32-36 gas oil, cracked	3.125 –3.25	3.00 – 3.25	3.25
32-36 gas oil, uncracked	3.25	3.25	3.25
16-20 fuel oil (in bbls.)	$1.15	$1.15	$1.15
ARKANSAS (For Arkansas intrastate shipment only)			
32-36 gas oil, straw	3.25 – 3.50	3.50	3.50 – 3.75
28-32 gas oil	3.00 – 3.25	3.25 – 3.375	3.25 – 3.50
Road oil	$1.25 –$1.30	$1.25 –$1.30	
ARKANSAS (F. O. B. Arkansas refineries for interstate shipment)			
28-32 gas oil	2.875– 3.125	3.00 – 3.125	3.00
Smackover crude fuel	$1.10 –$1.15	$1.10 –$1.15	$1.125–$1.15
Road oil	$1.15 –$1.25	$1.15 –$1.25	
CALIFORNIA (F. O. B. San Joaquin Valley. At San Francisco, 4c per bbl. more)			
14-18 fuel oil (in bbls.)	$0.65 –$0.90	$0.65 –$0.85	$0.65 –$0.85
14-18 Bunker oil (in bbls.)	$0.85 –$1.00	$0.80 –$1.00	$0.80 –$1.00
30-34 gas oil (in bbls.)	$1.00 –$1.05	$1.00 –$1.05	$1.00 –$1.05
27 Plus Diesel oil (in bbls.)	$1.00 –$1.05	$1.00 –$1.05	$1.00 –$1.05
NEW ENGLAND			
30-32 gas oil	$5.50	5.58	5.58
Fuel oil (Bunker C) in bbls.	$1.77	$1.73	$1.73

PETROLATUMS

PENNSYLVANIA (In cents per pound in tank cars; in barrels, in car lots ¾c per pound more.)

Snow White	7.25 – 7.50	7.25 – 7.50	7.25 – 7.50
Lily White	6.25	6.25	6.25
Cream White	5.25	5.25	5.25
Light Amber	2.625– 2.75	2.625– 2.75	2.625– 2.75
Amber	2.375– 2.50	2.375– 2.50	2.375– 2.50
Red	2.125	2.125	2.125
Green No. 5 color	1.50	1.50	1.50

*PETROLEUM COKE

(Per ton in car lots)

Lump	$5	$5	$5
Still run	$3	$3	$3
Breeze	$2	$2	$2

*Represents quotations and sales.

business was brisk. One large Oklahoma refiner shipped over 20 cars of bright stock this week, and was forced to carry over six instructions until next week. Refinery offices report similar situations.

Wax prices have shown a slight tendency to recuperate from their recent low level in Oklahoma. One large refiner reported, however, he had quoted some 124-126 white crude scale wax at 3 cents for over July and August but had received no orders. Another refiner reported the sale of 130 tons this week at 2.375 cents a pound. Another refiner reported a sale at 2.625 cents a pound.

Ohio Standard Resumes Use of Coupon Books

CLEVELAND, June 20.—At the end of a week of rumors that it would reduce the tank wagon and service station prices of gasoline, Standard Oil Co. of Ohio June 18 reduced the price of gasoline 2 cents a gallon at bulk storage service stations and resumed sale of coupon books which were discontinued April 20 when price of gasoline was reduced 2 cents. Coupon books good for $10 worth of merchandise are for sale at $9.05 each. The pump price of gasoline at bulk service stations is 19 cents a gallon.

East Coast Gasoline Unsettled; Refiners' Prices Steady

By Special Correspondent

NEW YORK, June 20

CONDITIONS in the Atlantic Seaboard gasoline market were more unsettled last week. Jobbing demand was not so good as expected regardless of the further gain in consumption. New York brokers say they can lay California gasoline in cargo lots down here at 7.75 to 8 cents a gallon. Several bulk cargoes afloat are en route from California to north Atlantic ports which were bought at fairly low prices. New York harbor refiners are asking 9 cents a gallon for U. S. Motor gasoline in tank cars. Weather was more favorable than a week ago.

Philadelphia refiners reported an easier market. Most refiners were asking 9 cents a gallon for U. S. Motor in tank cars at refineries and 10 cents in tank cars delivered to the nearby trade. Considerable gasoline is being shipped to upper New York state against contracts but this has not improved spot conditions.

Gulf refiners reported more favorable conditions. Consumption is mounting. At the refineries U. S. Motor is 7.75 cents a gallon while some refiners are asking up to 8 cents a gallon.

Kerosene buying was disappointing. Water white 41-43 was 6.75 cents a gallon at the refineries. Water white 43-45 was 0.25 cent above these prices.

Gulf refiners reported a slightly improved domestic demand for kerosene but prices did not change and 41-43 water white ranged 5 to 5.25 cents. Water white 44 was 6 to 6.25 cents.

CARLINVILLE, ILL., June 16.—An indication of the more aggressive sales and advertising methods the big marketing companies are now using in their efforts to get business is to be found at a prominent corner in this town.

There is a big billboard there, with four spaces, three of which are taken by oil companies. The Standard Oil Co. of Indiana uses two, one to tell of Red Crown, and the other advertising Kip, its own product of insect exterminator. The third is used by the Roxana Petroleum Corp., to tell of its "400 end point, extra dry" motor fuel.

Chicago Resale Market Sales Mostly in Small Orders

CHICAGO, June 18

BUYERS and sellers of gasoline in the Chicago market this week were trading mainly in small quantities; and this business was being done at a price which has prevailed here during the current month. One refiner reported a good volume of business this week, total of 250 cars, including several 5 and 10 car orders and a sale of 100 cars over two weeks.

Large quantities of gasoline are moving on contracts, and reports show that jobbers are taking out maximum quantities. One refiner reported that while his spot business is not as large as at a corresponding time last year, both in total number of cars moved and in number of jobbers inquiring, his contract movement is larger.

Price of 58-60 U. S. Motor gasoline was 6.75 cents over the week, with sufficient sales being made at 6.875 cents to be a market factor during the first three days. Carload marketers report bottom buying price in Oklahoma is 6.625 cents. Some Chicago marketers have offered their U. S. Motor gasoline to other marketers at a reported price of 6.50 cents, Group 3 freight basis.

High test gasolines were in little demand this week. Prices were steady; 60-62, 437 e. p. grade being 6.75 to 7 cents; 60-62, 400 e. p. 7 to 7.25 cents; and 64-66, 375 e. p. gasoline 7.25 to 7.50 cents. Several cars 68-70, 350 e. p. gasoline sold at 7.50 cents.

Kerosene moved fractionally lower at the close of business, the 41-43 w. w. grade selling at 4.25 to 4.375 cents through Thursday and closed at 4.125 to 4.375 cents.

Spot buying of heavy oils has been small this week and prices steady. The 38-40 straw distillate sold at 3.25 to 3.375 cents; 32-36 dark gas oil at 2.75 to 2.875 cents; and 32-36 straw gas oil at 2.875 and 3 cents for ordinary grade and a quarter cent higher for low cold test. A sale of 15 cars of 32-36 dark gas oil was made Tuesday at 2.68 cents.

Fuels were unchanged, 28-30 being $1.00 to $1.05; 24-26 fuel $0.95; 22-26 grade $0.925 to $0.95; and 18-22 fuel $0.90 to $0.925. Jobbers bought 35 cars of 28-30 fuel from a seller during the week at $1.

Early in the week several industrial companies were inquiring for small quantities of fuels over July. A marketer has completed a contract with an industrial for 4,000,000 gallons of 18-20 fuel oil over a year, material originating in Kansas, with the fixed price to change on percentage of any crude advance or decline. Another industrial company this week placed contract for 450,000 gallons of 24-26 fuel over a year.

A marketer reported receiving future industrial heavy oil contract inquiries on heavy oils totaling 400 cars, this includes a 100 car inquiry on 24-26 fuel oil; and an inquiry from a jobber for 25 cars 38-40 straw zero distillate over next winter.

Occasional showers throughout next week are forecast for Standard Oil Co. of Indiana territory. Temperatures are to be normal or above for the week.

Benzol Buying Increases

NEW YORK, June 20.

NEW YORK, June 20.—Leading marketers were asking 21 cents a gallon for motor benzol in tank cars at the ovens. Motor fuel blenders have been buying more heavily and are looking for a heavy increase in consumption shortly. Export demand has not improved. The movement of pure and 90 per cent benzol was slightly larger last week and prices were steady at 23 cents in tank cars at the works and 28 cents in drums.

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Week's Price Changes Tank Wagon Markets

Gasoline Changes

Standard of New Jersey—S.s. price only of gasoline advanced 2 cents, to 19 cents, Washington, D. C., **June 11.**

* * *

Atlantic Refining—T.w. and s.s. prices gasoline reduced 2 cents, Philadelphia, to 12 cents and 17 cents respectively, **June 15.**

* * *

Standard of Indiana—T.w. and s.s. prices gasoline advanced 2 cents, Mason City, to 16.5 cents and 18.5 cents respectively, **June 8.**

Kerosene Changes

Canada—T.w. price kerosene reduced ½-cent at Winnipeg, and 1 cent, Regina, to 23 cents and 26.5 cents respectively, **June 9.**

Predicts Large Future Supply of Benzol

CLEVELAND, June 18.—The time may not be long before probably 5 per cent of crude oil run by refineries will be converted into synthetic benzol for the blending of anti-knock motor fuel, C. O. Hoover, research chemist of the Deepwater Refineries, Inc., Houston, predicted at a meeting of the Western Reserve Petroleum Club here June 17. Mr. Hoover talked of the anti-knock properties of various motor fuels and answered questions. He predicted that eventually demand for anti-knock motor fuels would be met by refiners with pure petroleum products without the addition of other substances.

Mr. Hoover is concluding two months of talks before petroleum clubs in Ohio. Last month he talked about lubricating oils and this month about gasoline.

G. A. Votaw, Cleveland's sealer of weights and measures, explained what the city and state demand in devices to assure the public it is getting full measure when it buys gasoline. He said the sealer's department was protecting the oil distributors against dishonest employes as well as protecting the public against short measure.

Gasoline Plant Near Completion

LOS ANGELES, June 18.—The Bolsa Chica Oil Co.'s new natural gasoline plant, erected in the Ventura Avenue field by J. A. Campbell, and using Campbell equipment throughout, will be completed and in operation June 25. The plant will have a daily rated capacity of about 15,000 gallons of natural gasoline. This company has two wells on production and a third well nearing completion.

Tank Wagon, Service Station Markets for Gasoline and Kerosene In United States Territories and Canada

(OIL PRICE HANDBOOK has t.w. and s.s. markets for whole year arranged for quick reference)

These Prices In Effect June 20, 1927

S. O. NEW JERSEY TERRITOR Y

	Gasoline				Oil
			Total		
	T.W.	Tax	T.W.	S.S.	T.W
Atlantic City, N. J.	16	0	16	*	14
Newark, N. J.	16	0	16	18	14
Annapolis, Md.	16	4	20	23	14
Baltimore, Md.	16	4	20	23	10
Cumberland, Ind.	16	4	20	23	14
Washington, D. C.	14	2	16	19	12
Danville, Va.	16	4½	20.5	*	14
Norfolk, Va.	16	4½	20.5	20.5	14
Richmond	16	4½	20.5	23.5	14
Roanoke, Va.	16	4½	20.5	23.5	14
Petersburg, Va.	16	4½	20.5	23.5	14
Williamsburg, Va.	16	4½	20.5	*	14
Charleston, W. Va.	16	3½	19.5	22.5	14
Clarksburg, W. Va.	16	3½	19.5	22.5	14
Keyser, W. Va.	16	3½	19.5	*	14
Parkersburg, W. Va.	13	3½	16.5	19.5	14
Wheeling, W. Va.	16	3½	19.5	22.5	14
Charlotte, N. C.	16	4	20	23	14
Hickory, N. C.	16	4	20	23	14
High Point, N. C.	16	4	20	*	14
Mt. Airy, N. C.	16	4	20	23	14
Salisbury, N. C.	16	4	20	23	14
Charleston, S. C.	15	5	20	23	14
Columbia, S. C.	15	5	20	20	14

*Dealers set own prices. S. O. New Jersey does not operate station.

S. O. NEW YORK

Due to local price conditions at many points in S. O. New York territory, actual prices on both gasoline and kerosene are being made at under the posted tank wagon prices published below.

*New York City	19	0	19	23	15
Albany, N. Y.	19	0	19	21	15
Buffalo, N. Y.	15	0	15	18	14
†Rochester, N. Y.	15	0	15	18	14
Syracuse, N. Y.	19	0	19	21	15
Boston, Mass.	17	0	17	19	15
Augusta, Me.	19	3	22	25	15
Manchester, N. H.	17	2	19	21	15
Burlington, Vt.	19	2	21	23	15

*In steel barrels.

†It is reported that S. O. New York is selling a second grade of gasoline at Rochester, 4c below the above posted prices which apply on its Socony grade.

ATLANTIC REFINING

Pittsburgh, Pa.	16	*	16	*21	14
Philadelphia, Pa.	12	*	12	*17	14
Allentown, Pa.	16	*	16	*21	14
Erie, Pa.	14	*	14	*19	14
Scranton, Pa.	16	*	16	*21	14
Altoona, Pa.	16	*	16	*21	14
Dover, Del.	16	3	19	22	14
Wilmington, Del.	16	3	19	22	14
Providence, R. I.	17	1	18	20	15
Boston, Mass.	17	0	17	19	15
Springfield, Mass.	17	0	17	19	15
Worcester, Mass.	17	0	17	19	15
Hartford, Conn.	19	2	21	23	15
New Haven, Conn.	19	2	21	23	15

*2-cent state tax is collected by retail dealer and paid by him directly to state.

S. O. KENTUCKY

Lexington, Ky.	13	5	18	21	15.5
Louisville, Ky.	14	5	19	22	15
Covington, Ky.	15	5	20	23	15.5
Clarksdale, Miss.	13	4	17	20	13.5
Gulfport, Miss.	††13.5	4	††17.5	21.5	14
Jackson, Miss.	13	4	17	20	14.5
Natchez, Miss.	12.5	4	16.5	19.5	14
Vicksburg, Miss.	12.5	4	16.5	19.5	14
Birmingham, Ala.	14	4	18	21	15.5
Mobile, Ala.	13	4	17	20	15
Montgomery, Ala.	15	4	19	22	*16.5
Atlanta, Ga.	†14	3½	18	21	15
Augusta, Ga.	†15	3½	19	22	16
Macon, Ga.	†15	3½	19	22	16
Savannah, Ga.	†14	3½	18	20	14
Jacksonville, Fla.°	13	4	17	20	14
Miami, Fla.°	15	4	19	22	15.5
Tampa, Fla.°	12	4	16	19	15
Pensacola°	**14	4	**18	21	15

*Local privilege tax of 1 cent on gasoline and ½ cent on kerosene at Montgomery included.

†Georgia has ½ cent per gal. inspection fee on gasoline which is deducted as well as the state gasoline road tax of 3½ cents, to get the actual net tank wagon market to dealer.

°Florida gasoline prices include ½c inspection fee.

**Both tank wagon prices include 1c city tax at Pensacola, which went into effect Oct. 15, 1926.

††Both tank wagon prices at Gulfport include Harrison county privilege tax of 2c.

S. O. INDIANA

	Gasoline				Oil
			Total		
	T.W.	Tax	T.W.	S.S.	T.W.
Chicago, Ill.	14	0	14	16	12
Decatur, Ill.	14.2	0	14.2	16.2	12.1
E. St. Louis, Ill.	13.1	0	13.1	15.35	11.2
Joliet, Ill.	14.4	0	14.4	16.4	12.3
Peoria, Ill.	14.2	0	14.2	16.2	12.1
Quincy, Ill.	14.2	0	14.2	16.2	10.9
Indianapolis, Ind.	14.2	3	17.2	19.2	13.2
Evansville, Ind.	14	3	17	19	13
South Bend, Ind.	14.4	3	17.4	19.4	13.4
Detroit, Mich.	14.8	2	16.8	18.8	13.7
Grand Rapids, Mich.	14.7	2	16.7	18.7	13.6
Saginaw, Mich.	14.9	2	16.9	18.9	13.8
Green Bay, Wis.	14.6	2	16.6	18.6	12.4
Madison, Wis.	14.3	2	16.3	18.3	12.1
Milwaukee, Wis.	14.1	2	16.1	18.1	11.9
La Crosse, Wis.	15.2	2	17.2	19.2	13
Minneapolis, Minn.	12	2	14	16	12.9
Duluth, Minn.	13.5	2	15.5	17.5	12.9
Mankato, Minn.	13.1	2	15.1	17.1	12.7
Des Moines, Iowa	14	2	16	18	12.3
Davenport, Iowa	14.5	2	16.5	18.5	12.3
Sioux City, Iowa	14.1	2	16.1	18.1	11.9
Mason City, Ia.	14.5	2	16.5	18.5	12.3
St. Louis, Mo.	*13.6	2	15.6	17.9	11.3
Kansas City, Mo.	†12.9	2	14.9	16.9	10.6
St. Joseph, Mo.	†14.5	2	16.5	18.5	11.2
Fargo, N. D.	15	2	17	19	14.9
Grand Forks, N. D.	17.2	2	19.2	21.2	15.2
Minot, N. D.	16.9	2	18.9	20.9	14.9
Pierre, S. D.	15.5	3	18.5	20.5	13.9
Huron, S. D.	12.5	3	15.5	17.5	13.9
Wichita, Kans.	12.8	2	14.8	16.8	10.8
Bartlesville, Okla.	12.8	3	15.8	17.8	10.8

S. O. Indiana Q. D. A. schedule on tank wagon deliveries of gasoline, effective March 3 thru territory, except Wisconsin effective March 4: 50 gals. and over on delivery, 1c discount; 6,000 gals. and over per month, 1½c; 10,000 gals. and over per month, 2c; 15,000 gals. and over per month, 3c, except latter discount does not apply in Chicago.

Service station discounts: 200 gals. or more per month, and 2400 gals. or more per year, 2c per gal.

March 1, 1c discount on kerosene in 50 gal. $\frac{\text{P S}}{\text{d}}$ thru territory.

*Includes city tax of ½c.

†Includes city tax of 1c.

S. O. NEBRASKA

Omaha, Neb.	14.25	2	16.25	16.25	12.25
McCook	15.75	2	17.75	19.75	13.75
Norfolk	14.75	2	16.75	18.75	12.75
North Platte	15.75	2	17.75	19.75	13.50
Scottsbluff	15.25	2	17.25	19.25	13.00

CONTINENTAL OIL

Denver, Colo.	15	3	18	20	14.5
Pueblo, Colo.	14	3	17	17	14.5
Grand Junction, Colo.	18.5	3	21.5	23.5	18
Casper, Wyo.	15	3	18	20	13
Cheyenne, Wyo.	16	3	19	21	14.5
Butte, Mont.	19	3	22	22	19
Helena, Mont.	19.5	3	22.5	24.5	19
Salt Lake City, Utah	17.5	3½	21	23	17
Boise, Ida.	19.5	4	23.5	25.5	19
Twin Falls, Ida.	19.5	4	23.5	25.5	19
Albuquerque, N. M.	16	5	21	24	17

S. O. CALIFORNIA

Phoenix, Ariz.	18	3	21	25	21.5
Los Angeles, Cal.	12.5	2	14.5	18.5	15.5
Fresno, Cal.	13	2	15	19	16.5
San Francisco, Cal.	13	2	15	19	15.5
Reno, Nev.	17	4	21	25	19
Portland, Ore.	13.5	3	16.5	20.5	16.5
Seattle, Wash.	13.5	2	15.5	19.5	16.5
Spokane, Wash.	17.5	2	19.5	23.5	20.5
Tacoma, Wash.	13.5	2	15.5	19.5	16.5

S. O. LOUISIANA

Little Rock, Ark.	13	5	18	21	12
Alexandria, La.	13	2	15	18	†14
Baton Rouge, La.	12	2	14	17	†12.5
Lake Charles, La.	13.5	2	15.5	18.5	†14
New Orleans, La.	*13.5	2	*15.5	*18.5	*14
Shreveport, La.	12	2	14	17	†13
Lafayette, La.	13	2	15	18	†13.5
Bristol, Tenn.	16	3	19	22	14
Chattanooga, Tenn.	16.5	3	19.5	22.5	15
Knoxville, Tenn.	16.5	3	19.5	22.5	15
Nashville, Tenn.	13.5	3	16.5	19.5	15
Memphis, Tenn.	10	3	13	16	14

*New Orleans gasoline prices include 1c parish tax in addition to 2c state tax, and kerosene prices include 1c state tax and 1c parish tax.

†Kerosene prices in Louisiana include 1c state tax.

S. O. OHIO

	Gasoline				Oil
			Total		
	T.W.	Tax	T.W.	S.S.	T.W.
All Ohio points	16	3	19	21	15

MAGNOLIA PETROLEUM

Muskogee, Okla.	11	3	14	17	9
Oklahoma City	11	3	14	17	9
Tulsa, Okla.	11	3	14	17	9
Fort Smith, Ark.	13	5	18	21	12
Little Rock, Ark.	13	5	18	21	12
Texarkana, Ark.	†15	5	†*20	†*20	12
Dallas, Tex.	†15	3	†18	†18	11
Fort Worth, Tex.	†15	3	†18	†18	10
Houston, Tex.	††16	3	††19	††19	15
San Antonio, Tex.	†15	3	†15	†15	11
El Paso, Tex.	**16	3	**19	**19	16

*Within city of Texarkana the state tax on gasoline is 3c per gal. conforming with the Texas state tax. In Texarkana district outside of the city the 5c Arkansas tax applies.

†3c per gal. discount to dealers.

**2c per gal. discount to dealers at El Paso, Feb 2[3].

††4c per gal. discount to dealers at Houston March 16, 1927.

V. M. & P. NAPHTHA

(Changes ordinarily occur coincident with gasoline price changes)

	Oleum Spirits	V.M. & P. Naphtha	Cleaner Naphtha
Chicago	16	18	18
Detroit	17.7	19.7	19.7
Kansas City	16.2	†18.2	†18.2
Milwaukee	16.7	*20.7	*20.7
Minneapolis	*20	*22	*22
St. Louis	15.9	17.9	17.9
New York		19	

*Includes 2c state tax.

†Includes 1c city tax.

CANADA

(Per Imperial Gallon, which is 1.2 American Gallons)

ONTARIO

	Gasoline				Oil
			Total		
	T.W.	Tax	T.W.	S.S.	T.W.
Toronto	19.5	3	22.5	26	21
Ottawa	19.5	3	22.5	26	21
Cochrane	24.5	3	27.5	36	26
Ft. William	22.5	3	25.5	29	23.5

MANITOBA

Winnipeg	24.5	3	27.5	31	23

SASKATCHEWAN

Regina	27.5	0	27.5	32	26.5

ALBERTA

Edmonton	26.5	3	29.5	33	25.5
Calgary	24.5	3	27.5	31	23.5

BRITISH COLUMBIA

Vancouver	20	3	23	27	21

QUEBEC

Montreal	20.5	3	23.5	27	21
Quebec City	22.5	3	25.5	29	23
Three Rivers	22.5	3	25.5	29	23

NEW BRUNSWICK

St. John	24.5	3	27.5	32	24
Moncton	24.5	3	27.5	32	24

NOVA SCOTIA

Halifax	24.5	3	27.5	32	24
Sydney	26.5	3	29.5	34	26

PRINCE EDWARD ISLAND

Charlottetown	24.5	3	27.5	31	24

Note: In districts surrounding these points 1c additional is added to city price.

Export Buying of Gasoline Slumps but Price of 64-66 Advances

By Special Correspondent
NEW YORK, June 30.

EXPORT buying slumped again last week but gasoline prices held steady, in fact, 64-66, 375 end point was advanced 0.50 cent by some of the big refiners. European buyers are showing a keen interest but are content to hold off a few days pending developments. Cased gasoline was reduced 0.50 cent at New York but was steady at the Gulf. Kerosene was stagnant. Gas oil demand was more active. There was a fairly good movement of lubricating oils.

Export Gasoline—New York

Standard Oil Co. of New Jersey reduced price of cased gasoline 0.50 cent a gallon at New York to 24.40 cents. Most New York harbor refiners were asking 9 cents a gallon for U. S. Motor.

There was an inquiry from the United Kingdom for 45,000 barrels of U. S. Motor and 64-66, 375 e. p. gasoline for August shipment but this is still pending. Stocks of gasoline are large. Cased gasoline demand lagged. One lot of 40,000 cases was sold for August shipment to Australasia.

Export Gasoline—Gulf

It was reported 50,000 barrels of 61-63, 390 e. p. at 8.125 cents and 64-66, 375 e. p. at 8.50 cents a gallon was sold for August shipment to Scandinavia but confirmation was lacking. The bulk market was not so active as in the preceding week but refiners still show confidence in the future. Several leading refiners are asking 9 cents a gallon for 64-66, 375 e. p. gasoline but others are willing to sell at 8.50 cents. Other grades of gasoline were quoted as follows on Saturday: U. S. Motor 7.50 cents; 60-62, 400 e. p. 7.75 cents and 61-63, 390 e. p. at 8 to 8.125 cents a gallon.

An Independent refiner is reported to have sold 50,000 cases of U. S. Motor and 64-66, 375 e. p. at $1.75 and $1.95 a case, respectively, for August shipment to Japan.

Export Kerosene—New York

Export demand for kerosene was not improved. For 41-43 water white the price was 6.75 cents a gallon at New York Harbor refineries and 43-45 water white was quoted at 7 cents. A Scandinavian buyer was reported to be inquiring for 45,000 barrels of prime and water white kerosene for August shipment but this has not been consummated yet. Cased kerosene demand lagged. Buyers with foreign connections showed little interest. The only sale reported was 25,000 cases of prime and water white for August shipment to South America.

Export Kerosene—Gulf

Gulf refiners reported a slightly more active export inquiry for kerosene but demand did not improve. No heavy buying is looked for until the middle of the summer. There was an inquiry from France for 30,000 barrels of prime and water white but this did not materialize. Leading refiners were asking 5 to 5.25 cents for 41-43 prime and 6 to 6.25 cents for 44 water white.

Cased kerosene was steady but quiet. It was reported 45,000 cases were sold for July shipment to Australasia but this was not confirmed. Prime in cases was $1.50 and water $1.60 a case, in cargo lots.

Waxes—New York

Demand for white crude scale wax was slightly more active last week but in the main trading was confined to small quantities. Leading sellers were offering 122-124 A.m.p. scale freely at 3 cents a pound but export buyers failed to respond and most of the purchases were made by domestic consumers.

Fully refined wax was sluggish. There were several inquiries from the Continent for fifty tons each but European buyers are not purchasing ahead. South American buyers are showing little interest. Refiners were quoting 4 cents a pound for 123-125 and 125-127 A.m.p.

Waxes—Gulf

Gulf refiners reported a keener foreign buying interest but actual trading was confined to small quantities. A Spanish buyer is reported to have purchased 100 tons of white crude scale 124-126 A.m.p. at 2.75 cents although confirmation was lacking. Fully refined waxes were dull and weak with buyers content with purchasing as needed.

Saturday white crude scale, 124-126 A.m.p. was held at 2.75 cents; 124-126 semirefined 2.75 cents and 124-126 yellow at 2.625 cents. The fully refined grades were quoted as follows: 123-125 A.m.p., 3.875 cents; 125-127, 3.875 cents; 128-130, 4 cents; 133-135, 5.125 cents and 135-137, 5.50 cents.

Bunker Oil—New York

Export buying interest in grade C bunker oil was negligible. Most large refiners were offering more freely at $1.65 a barrel at refineries and $1.715 a barrel f.a.s. New York Harbor. Stocks are large.

Diesel oil held fairly steady at $2.20 a barrel. The inquiry was more active.

Bunker Oil—Gulf

Leading Gulf refiners did a better business and prices were advanced 10 cents a barrel for bunkering at the Gulf. Refiners were asking $1.40 a barrel f.o.b. New Orleans while cargoes were still quoted at $1.35 a barrel, same basis.

At Tampico grade C for bunkering was quoted at $1.55 a barrel f.o.b. Tampico, including taxes. No cargo offerings were made. Heavy Panuco crude oil was held at $1.13 a barrel f.o.b. Tampico, taxes to be added.

Lubricating Oils—New York

New York Harbor refiners and exporters reported a much improved export inquiry for Pennsylvania lubricating oils. Demand has been steadily improving and refiners are quoting the same prices as a week ago. It was persistently rumored that an Independent refiner had sold a cargo of assorted lubricants for August shipment to France. Domestic consumption is holding up well. Pennsylvania 600 s. r. unfiltered cylinder oil in barrels, New York, was quoted at 16.5 cents a gallon.

Lubricating Oils—Gulf

Export inquiries for Texas lubricating oils were more numerous but demand failed to improve. A German buyer was reported to be inquiring for 35,000 barrels of assorted lubricants for August shipment and it was rumored that this was booked although confirmation was lacking. Domestic demand lagged.

Gas Oil—New York

Export as well as domestic demand for gas oil failed to improve and business was mainly hand-to-mouth. For 36-40 at the New York Harbor refineries the asking price was 5.5 cents a gallon while 28-34

Complete Export Markets

(Export markets for whole year given in OIL PRICE HANDBOOK. Each volume carries refinery, tank wagon, crude and export markets—complete for years 1924-1925-1926)

New York Export Market

GASOLINE	June 20	June 13
U. S. Motor f. o. b. New York Harbor	8.75 – 9.00	9.00
U. S. Motor cases	24.40	24.50
KEROSENE		
43-45 150 W. W. Bulk Ref.	7.00	7.00
41-43 Prime White Bulk Ref.	6.75	6.75
43-45 150 W. W. Cases	17.15	17.15
42-44 110 S. W. Cases	16.15	16.15
GAS OIL		
36-40 Bulk Refinery	5.50	5.50
28-34 Bulk Refinery	5.25	5.25
MEXICAN BUNKER OIL		
Grade C. f. o. b. ref. Bulk	$1.65	$1.65
Diesel Oil f. o. b. ref. Bulk	$2.20	$2.20

LUBRICATING OILS

The following are cooperage basis f. o. b. New York, products being manufactured by inland refineries.

CYLINDER OILS (per Gallon in Barrels)		
1 inch Immersion Test; All Penna. Products		
Bright Stock dark	41.00	42.00
Filtered D 600	35.00	35.00
Filtered E 600-Warren	27.00	26.75
Unfiltered 600 s. r.	16.50	16.50
Unfiltered 650 s. r.	20.00	19.00
600 Flash s. r.	23.00	23.00
630 Flash	35.00	36.00
RED ENGINE OILS (Per Gallon in Barrels) (Viscosity at 100°)		
300 Vis. No. 6½ color	22.00	22.00
250 Vis. No. 6 color	21.50	21.50
200 Vis. No. 6 color	20.00	20.00
PALE ENGINE OILS (Per Gallon in Barrels) (Viscosity at 100°)		
230 Vis. No. 3¾ color	26.00	26.00
180 Vis. No. 3¼ color	21.50	21.50
100 Vis. No. 2¼ color	16.75	16.75
MOTOR OILS (Per Gallon in Barrels) (Viscosity at 100°)		
600 No. 6 color	37.00	37.00
500 No. 7 color	36.00	36.00
400 No. 6½ color	33.00	33.00
300 No. 6 color	29.00	29.00
200 No. 3¾ color	23.50	23.50

MEDICINAL OILS (Includes Price of Drums) (Penna Stocks)	June 20	June 13
Domestic 875-.885 s. g.	.80	.85
Domestic 865-.870 s. g.	.70	$ .75 – .80
Russian 885-.890 s. g. 325-330 vis.	$ .80 – .90	$ .90 – .95

WAXES (Penna Stocks) (In Cents per Pound, F. A. S. Carload Lots)		
WHITE CRUDE SCALE (Shipped in Bbls.)		
122-124 A. m. p.	3.00	3.25
124-126 A. m. p.	3.125	3.375
FULLY REFINED (Shipped in Burlap Bags)		
123-125 A. m. p. Philadelphia	4.00	4.00
125-127 A. m. p.	4.00	4.00
128-130 A. m. p.	4.250	4.125
130-132 A. m. p.	4.50	4.50
133–135 A. m. p.	5.50	5.50
135-137 A. m. p.	5.875	5.875
YELLOW CRUDE SCALE		
124-126 A. m. p.	3.00	3.00
PETROLATUMS (Penna Stocks) Per Pound		
Dark Green	1.875	2.00
Veterinary	3.00	3.125
Light Amber	3.625	3.750
Dark Amber	3.250	3.375
Cream	5.75	5.75
Lily White	7.25	7.25
Snow White	8.125	8.375

Gulf Export Market

GASOLINE F. O. B. Gulf Oil Terminals, Texas and Louisiana (Shipments of 20,000 Bbls. and over)	June 20	June 13
U. S. Motor Bulk	7.50	7.50
60-62 400 e. p. Bulk	7.75	7.75
61-63 390 e. p. Bulk	8.00	8.00
64-66 375 e. p. Bulk	8.50-9.00	8.50
U. S. Motor, Cases (cargo lots)	$1.75	$1.80
64-66 Cases (cargo lots)	$1.95	$1.90
KEROSENE		
Water White, 43-45 Bulk	6.00 – 6.25	6.00 – 6.25
Prime White, 41-43 Bulk	5.00 – 5.75	5.00 – 5.25
Water White, cases (cargo lots)	$1.60	$1.60
Prime White, cases (cargo lots)	$1.50	$1.50
DOMESTIC GAS AND BUNKER OIL		
26-28, gravity, Bulk*	4.125	4.125
32 plus, bulk, Dark	4.00	4.00
Grade C, Bunker oil	$1.50	$1.40
Cargoes	$1.35	$1.30

*Translucent through neck of a 4 oz. bottle.

MEXICAN CRUDE AND BUNKER OILS, F. O. B. Steamer Tampico		
Heavy, Panuco crude Taxes to be added	$1.13	$1.13
Grade C, Bunker oil, F. O. B. Tampico, For Bunkering Purposes, taxes paid	$1.55	$1.55

SOUTH TEXAS (Viscosity at 100° F; cold test 0) (Tanker, F. O. B. Houston)

LUBRICATING OILS	June 20	June 13
100 Vis. No. 2 Unfiltered Pale	6.00	6.00
150 Vis. No. 2½ Unfiltered Pale	8.50	8.50
200 Vis. No. 3 Unfiltered Pale	9.00	9.00
300 Vis. No. 3 Unfiltered Pale	10.00	10.00
500 Vis. No. 3½ Unfiltered Pale	12.50	12.50
200 Vis. No. 5½ Red Oil	8.00	8.00
300 Vis. No. 5½ Red Oil	9.00	9.00
500 Vis. No. 6 Red Oil	10.50	10.50

Pacific Export Market

(Quotations are at seaboard. Los Angeles in Cargo lots)

	June 20	June 13
Gasoline, U. S. Motor—53°-55°	6.00 – 7.00	6.00 – 7.00
Gasoline, U. S. Motor—blends and special cuts	7.00 – 8.00	7.00 – 8.00
Gas Oil, 30°-34° in bbls.	$1.00 – 1.05	$1.00 – 1.05
Diesel Oil, 27°—plus in bbls.	$ .95 – 1.05	$ .95 – 1.05
Bunker Oil, 14°-18° in bbls.	$ .85 – 1.00	$ .85 – 1.00
Fuel Oil, 14°-18° in bbls.	$ .70 – .75	$ .70 – .75
Kerosene, W. W. 38°-40°, 125-150 flash (Gals.)	4.50 – 5.50	5.00 – 6.00
Cased Goods		
Gasoline, U. S. Motor	$2.00 – 2.25	$2.00 – 2.25
Kerosene, W. W. 38°-40°, 125-150 flash	$1.50 – 1.60	$1.50 – 1.60

N. Y. Domestic Market

The following light oil, gas and fuel prices are F. O. B. New York refineries being products made from Domestic (including California) and Mexican Crudes.

GASOLINE	June 20	June 13
U. S. Motor tank cars, f.o.b. N. Y. refinery	8.75 – 9.00	9.00
U. S. Motor, tank cars, delivered Greater N. Y.	9.75 –10.00	10.00
Philadelphia, U. S. Motor, tank cars f. o. b. Philadelphia refinery	8.75 – 9.00	9.00
Philadelphia U. S. Motor, tank cars delivered nearby trade	9.75 –10.00	10.00
KEROSENE		
43-45 150 W. W. Tank Cars delivered greater N. Y.	8.00	8.00
41-43, Bulk Ref. Prime	6.75– 7.00	6.75
FUEL OILS		
Grade C Bunker f. o. b. N. Y. Ref.	$1.65	$1.65
Diesel Oil f. o. b. Refinery	$2.20	$2.20
Gas Oil, 36-40, Bulk Refinery	5.50	5.50
Gas Oil, 28-34, Bulk Refinery	5.25	5.25
Furnace Oil, 38-42, Bulk Refinery	6.50	6.50
Furnace Oil from Tank Wagons	10.00	10.00

was still quoted at 5.25 cents a gallon. Stocks of gas oil on hand are heavy and it is persistently rumored these prices are being shaded. The movement was chiefly against contracts.

Gas Oil—Gulf

A Scandinavian buyer was inquiring for 28,000 barrels of dark gas oil for July-August shipment from the Gulf but this is still hanging fire. The undertone of the gas oil market was easier and 32 plus dark oil was plentiful at 4 cents a gallon with reports current of offerings a shade below this figure. For 26-28 red translucent the price was still 4.25 cents a gallon. Buying was mainly domestic and for prompt needs.

Petrolatums

Refiners reported a more active British inquiry for lily and snow white but demand failed to improve. Medicinal oils were dull.

Slocum is Getting Well

EL DORADO, KAN., June 15.—G. A. R. Slocum, sales manager for the Skelly Oil Co., is improving rapidly at Kansas City following his recent serious illness brought about by too close application to his work. It is expected that Mr. Slocum will be able to return to his home shortly. Doctors are advising him to keep away from his desk at the Skelly offices for another six weeks.

Crude Oil Prices, as Posted by Major

(Crude prices for years 1924-1925-1926 in

EASTERN FIELDS

(Posted by Joseph Seep Purchasing Agency)

Penna. Grade Oil in New York Transit Lines (Allegheny, N. Y. District)	$2.90
Bradford District Oil in National Transit Lines (Bradford District)	2.90
Penna. Grade Oil in National Transit Lines (Other Pennsylvania)	2.80
Penna. Grade Oil in Southwest Penna. Pipe Lines (Other Pennsylvania)	2.80
Penna. Grade Oil in Eureka Pipe Lines (West Virginia)	2.75
Penna. Grade Oil in Buckeye Pipe Lines (Macksburg, O. district)	2.60
Keister Grade in National Transit Lines (Butler Co.)	1.10
Cabell Grade in Eureka Pipe Lines (West Virginia)	1.40
Corning Grade in Buckeye Pipe Lines (Ohio)	1.45
Corning, O. heavy grade	1.35
*Somerset Oil in Cumberland Pipe Lines (Kentucky)	1.50
Ragland Grade in Cumberland Pipe Lines (Kentucky)	.95

*Somerset oil run prior to Oct. 1922, 1, takes price of 6 cents lower than above quotations.

(Posted by Stoll Oil Refining Co.)

Oil City, Ky., oil in Stoll lines	$1.50

CENTRAL STATES FIELDS

Posted by Ohio Oil Co.

Effective March 14, 1927

Wooster	$1.77	Plymouth	$1.33
Lima	1.71	West, Kentucky	1.33
Waterloo	1.35	*Canadian Petro.	2.11
Indiana	1.48	*Oil Springs	2.18
Princeton	1.60	*Posted by Imperial Oil Ltd.	
Illinois	1.60		

OKLAHOMA, KANSAS And NORTH TEXAS

Prices of Prairie Oil & Gas Co.

(In Oklahoma, Kansas, North and East Central Texas)

Effective March 12, 1927

28-28.9	$1.12	35-35.9	$1.26
29-29.9	1.14	36-36.9	1.28
30-30.9	1.16	37-37.9	1.30
31-31.9	1.18	38-38.9	1.32
32-32.9	1.20	39-39.9	1.34
33-33.9	1.22	40-40.9	1.36
34-34.9	1.24	41-41.9	1.38
42-42.9	$1.40	48-48.9	$1.52
43-43.9	1.42	49-49.9	1.54
44-44.9	1.44	50-50.9	1.56
45-45.9	1.46	51-51.9	1.58
46-46.9	1.48	52 and above	1.60
47-47.9	1.50		

Above schedule met on March 12, by Gulf, Mid-Continent Pet. Corp., and Empire; by Carter, Humble and the Texas Co. on March 14.

Humble Oil & Refining Co. Prices

(Ranger, North Texas, Mexia, Powell, Richland, Wortham, Lytton Springs, Currie, Moran and Nocona crudes all in Texas.)

March 14, same schedule as Prairie in above fields except that Humble is paying 2c less for each degree of gravity on oil below 28°.

Mirando, Tex.	$1.00

Magnolia Petroleum Co.

(In Oklahoma, Kansas and North and East Central Texas)

Effective May 5

Below 33	$1.05	43-43.9	$1.27
33-33.9	1.07	44-44.9	1.29
34-34.9	1.09	45-45.9	1.31
35-35.9	1.11	46-46.9	1.33
36-36.9	1.13	47-47.9	1.35
37-37.9	1.15	48-48.9	1.37
38-38.9	1.17	49-49.9	1.39
39-39.9	1.19	50-50.9	1.41
40-40.9	1.21	51-51.9	1.43
41-41.9	1.23	52 and above	1.45
42-42.9	1.25		
Corsicana heavy			$1.00

Carter Oil Co.

(Oklahoma and Kansas)

March 14, same schedule as Prairie.

PANHANDLE, TEXAS

Humble Oil & Refining Co.

Effective March 14

Hutchinson, and Carson Counties			$0.95
Gray and Wheeler Counties:			
28-28.9	$ .80	37-37.9	$ .98
29-29.9	.82	38-38.9	1.00
30-30.9	.84	39-39.9	1.02
31-31.9	.86	40-40.9	1.04
32-32.9	.88	41-41.9	1.06
33-33.9	.90	42-42.9	1.08
34-34.9	.92	43-43.9	1.10
35-35.9	.94	44 and above	1.12
36-36.9	.96		

WEST TEXAS

(Crane, Upton and Crockett Counties)

Humble Oil & Refining Co.

Effective March 14

Below 26	$ .70	31-31.9	$ .82
26-26.9	.72	32-32.9	.84
27-27.9	.74	33-33.9	.86
28-28.9	.76	34-34.9	.88
29-29.9	.78	35-35.9	.90
30-30.9	.80	36 and above	.92

NORTH LOUISIANA — ARKANSAS FIELDS

Prices of Standard Oil Co. of Louisiana Caddo, Homer, Haynesville, Bull Bayou, El Dorado, Crichton and De Soto

Effective March 14, 1927

Below 28	$1.10	40-40.9	$1.36
28-28.9	1.12	41-41.9	1.38
29-29.9	1.14	42-42.9	1.40
30-30.9	1.16	43-43.9	1.42
31-31.9	1.18	44-44.9	1.44
32-32.9	1.20	45-45.9	1.46
33-33.9	1.22	46-46.9	1.48
34-34.9	1.24	47-47.9	1.50
35-35.9	1.26	48-48.9	1.52
36-36.9	1.28	49-49.9	1.54
37-37.9	1.30	50-50.9	1.56
38-38.9	1.32	51-51.9	1.58
39-39.9	1.34	52 and above	1.60

Smackover, below 24	$1.00
do 24 and above	1.25
Bellevue	1.25
Cotton Valley	1.00
**Urania, La.	1.00
†East El Dorado	1.00

**Posted by Louisiana Oil Refining Corp.

†Posted by Magnolia Petroleum Co.

STEPHENS, ARKANSAS

Atlantic Oil Producing Co. and Louisiana Oil Refining Corp.

Below 28	$1.00	30-30.9	$1.06
28-28.9	1.02	31-31.9	1.08
29-29.9	1.04	32 and above	1.10

GULF COASTAL

Posted by Humble Oil & Refining Co.

Effective March 14

Grades A	$1.20	29-29.9	$1.25
Grades B:		30-30.9	1.27
Below 25	1.15	31-31.9	1.29
25-25.9	1.17	32-32.9	1.31
26-26.9	1.19	33-33.9	1.33
27-27.9	1.21	34-34.9	1.35
28-28.9	1.23	35 and above	1.37

Fields classified as A and B are Spindletop, Goose Creek, Hull, Liberty, Sour Lake, West Columbia, Orange, Boling and Pierce Junction. All other fields are Grades A only.

Tanker Rates Peg Price of Gasoline at 6 Cents

Staff Special

LOS ANGELES, June 18.—The petroleum market was without material change this week in California.

There were no sales heard of for export, although shipments on contracts about held their own. Tanker rates are slightly lower with one cargo of gasoline recently leaving San Francisco for East Coast at 82½ cents. This permits U. S. Motor selling at 6 cents, California refinery to compete on the east coast with other gasolines. In this manner, the market is fixed at 6 cents.

Fuel oil holds at previous quotations for export and there is no change in the tank car price, which holds around 65 to 85 cents from small independent refiners for shipment to points within Pacific coast trade territory. The export quotations range from 70 to 75 cents.

Kerosene is now quoted at 4½ to 5½ cents for export with little moving. Previous quotations have been carried at 5 to 6, but the new low of 4½ cents is the extreme low without much moving and little available at such a price.

Bunker prices are holding around 85 to $1 at Los Angeles harbor with prices at San Francisco harbor 4 cents higher. This business goes to the major refiners with harbor facilities and the smaller refiner is not able to disturb with lower prices when he wants to unload a few hundred barrels to ease his storage facilities.

There is no change in the crude price situation and there was no further talk this week of a rumored raise in price. When Seal Beach production is on the actual and positive downward path, a change may be expected; as the summer comes along smaller refiners will be seeking crude supplies. At present they are well taken care of.

* * *

LOS ANGELES, June 17.—Twenty tankers during the week ended June 11 departed from Los Angeles harbor carrying 1,448,858 barrels of petroleum products to points outside of Pacific coast trade territory, or a daily average movement of 206,979 barrels. The daily average for previous week was 221,654 barrels.

Pacific foreign points drew 126,585 barrels of crude, 236,215 barrels of fuel and 56,000 barrels of kerosene. Atlantic domestic drew 228,861 barrels of crude, 247,342 barrels of fuel, 151,609 barrels of gasoline, 67,437 barrels of gas oil and 25,312 barrels of Diesel. The rest went to Atlantic foreign ports.

Purchasers, in All Fields (in Effect June 20, 1927)

OIL PRICE HANDBOOK published annually)

GULF COASTAL

Prices of The Texas Co.

(Effective March 14)

Grades A	$1.20	*Grades B	$1.15
‡Grades B (light crude):			
35-35.9	$1.37	38-38.9	$1.43
36-36.9	1.39	39-39.9	1.45
37-37.9	1.41	40 and above	1.47

*Grades B include all heavy crudes which do not meet tests for Grades A or for Gulf Coast light crude.

‡The Texas Co.'s gravity and price schedule on oil below 35° is same as Humble's postings on Grades B.

ROCKY MOUNTAIN FIELDS

Prices of Ohio Oil Co. and Midwest Refining Co.

(Salt Creek prices effective March 12)

‡Salt Creek	29-29.9	$1.14
" "	30-30.9	1.16
" "	31-31.9	1.18
" "	32-32.9	1.20
" "	33-33.9	1.22
" "	34-34.9	1.24
" "	35-35.9	1.26
" "	36-36.9	1.28
" "	37 and above	1.30
Elk Basin		1.33
Grass Creek light		1.33
Big Muddy		$1.25
Lance Creek		1.33
Rock Creek		1.25
Mule Creek		1.30
Rex Lake		1.10
‡Osage		1.33
‡Cat Creek, Mont.		1.33
Sunburst, Mont.		1.35
‡Hogback, N. Mex.		1.38
Artesia, N. Mex.		1.00

‡Posted by Midwest Refining Co. Midwest also buys Grass Creek light and Elk Basin.

The Texas Co. buys Salt Creek and Big Muddy crude.

CALIFORNIA

Standard Oil Co. of California

Gravity	Signal Hill Seal Beach Huntington Beach	Inglewood Torrance	Whittier La Habra	Newhall, McKittrick, Kern River	Olinda-Brea Canon, Richfield	Athens-Rosecrans Dominguez	Montebello	Coyote Hills	Santa Fe Springs	Midway, Sunset Buena Vista & Elk Hills	Lost Hills	Coalinga	Wheeler Ridge	Santa Maria	Ventura
	Santa Maria and Ventura Posted by Union Oil Co.														
14-14.9	$ .85	$ .85	$ .85	$ .75	$ .85	....	$ .85	$ .85	....	$ .75	$ .75	$ .75	$ .75	$ .85	$ .85
15-15.9	.85	.85	.85	.75	.85	....	.85	.85	....	.75	.75	.75	.75	.85	.85
16-16.9	.85	.85	.85	.75	.85	....	.85	.85	....	.75	.75	.75	.75	.85	.85
17-17.9	.85	.85	.85	.75	.85	....	.85	.85	....	.75	.75	.75	.75	.85	.85
18-18.9	.85	.85	.85	.75	.85	....	.85	.85	....	.75	.75	.75	.75	.85	.85
19-19.9	.85	.85	.85	.75	.85	....	.85	.85	....	.75	.75	.75	.75	.85	.85
20-20.9	.85	.85	.85	....	.85	....	.85	.85	....	.77	.77	.76	.78	.85	.85
21-21.9	.86	.86	.85	....	.86	....	.85	.86	....	.79	.79	.77	.81	.85	.85
22-22.9	.87	.87	.85	....	.87	....	.85	.87	....	.81	.81	.78	.85	.85	.85
23-23.9	.88	.88	....	....	.88	....	.85	.88	....	.83	.83	.79	.89	.85	.85
24-24.9	.89	.89	....	....	.89	$ .89	.85	.89	.85	$ .85	.85	.80	.93	.85	.85
25-25.9	.90	.90	....	....	.90	.90	.86	.90	.85	.87	.87	.81	.97	.86	.86
26-26.9	.92	.92	....	....	.92	.92	.87	.91	.85	.89	.89	.83	1.01	.87	.87
27-27.9	.94	.94	....	....	.94	.94	.88	.92	.85	.91	.91	.85	1.05	.88	.88
28-28.9	.96	.96	....	....	.96	.96	.89	.93	.86	.93	.93	.87	....	.89	.89
29-29.9	.98	....	....	....	.98	.98	.90	.94	.87	.96	.96	.89	....	.91	.91
30-30.9	1.00	....	....	....	1.00	1.00	.91	.95	.88	.99	.99	.91	....	.93	.93
31-31.9	1.03	....	....	....	....	1.03	....	....	.89	1.02	1.02	.93	....	....	.95
32-32.9	1.06	....	....	....	....	1.06	....	....	.91	1.05	1.05	.95	....	....	.97
33-33.9	....	....	....	....	....	1.09	....	....	.93	1.08	1.08	.97	....	....	.99
34-34.9	....	....	....	....	....	1.12	....	....	.95	....	1.11	.99	....	....	1.01
35-35.9	....	....	....	....	....	1.15	....	....	.97	....	....	1.01	....	....	1.03
36-36.9	....	....	....	....	....	1.18	....	....	.99	....	....	....	....	....	1.06
37-37.9	....	....	....	....	....	1.21	....	....	1.01	....	....	....	....	....	1.09
38-38.9	....	....	....	....	....	1.24	....	....	1.03	....	....	....	....	....	1.12
39-39.9	....	....	....	....	....	1.27	....	....	1.06	....	....	....	....	....	1.15
40-40.9	....	....	....	....	....	1.30	....	....	1.09	....	....	....	....	....	....
41-41.9	....	....	....	....	....	1.33	....	....	1.12	....	....	....	....	....	....
42-42.9	....	....	....	....	....	1.36	....	....	1.15	....	....	....	....	....	....

*Union Oil Co. also purchases Long Beach Crude and is maintaining the same gravity and price schedule in that field as the Standard maintains in Signal Hill and Huntington Beach fields. The Union also buys and pays the same prices as the Standard in the Rosecrans-Dominguez fields, on gravities ranging from 14 degrees to and including 24.9 degrees and in Santa Fe Springs, on gravities ranging from 20 to and including 23.9 degrees.

REFINERS' and COMPOUNDERS' SUPPLIES

Following are the average market prices for the week on materials used by refiners and compounders f. o. b. shipping point as effective this date.

Refiners' Supplies

	June 20	June 13
Soda Ash light 58% bags. cwt.	$1.325	-$1.325
Silicate of Soda 60 deg. drums. cwt.	$1.65	$1.65
Sal Soda wks.	$0.90-$1.10	$0.90-1.10
Caustic Soda 76% solid cwt.	$3.00	3.00
Chloride of Lime. cwt. works.	$2.00	2.00
Sulphuric Acid 60 deg. tank cars f. o. b. shipping point. per ton	$10.50-11.00	10.50-11.00
Liquid Chlorine tank cars works. lb.	4	4

Compounders' Supplies (Open Market)

	June 20	June 13
Vegetable Oils—		
Linseed carloads spot. lb.	11.2	11.2
June	11.2	11.2
Tanks spot	10.4	10.4
*Soya Bean Tanks, Coast. lb.	9.50	9.50
Castor Oil—		
No. 1 Carlots, Bbls.	13.50	13.50
No. 3 Carlots, Bbls.	13.00	13.00
Animal Oils—		
English Degras	5.375	5.375
Domestic Degras, bbls., carloads. lb.	4.50	4.50
Oleic Acid—		
Dist. Bbls. lb.	9.50	9.50
Saponified Bbls. lb.	9.75	9.75
Lard Oils—		
Prime		
Winter Strained 2 to 1½ ffa. 40-45c.t.lb.	14.875	14.875
Extra		
Winter Strained 2 to 4½ ffa. 40-45c.t.lb.	12.75	12.75
Extra. 4 to 5 ffa. 40-45c.t.lb.	11.875	11.875
Extra No. 1. 7 to 10 ffa. 40-59c.t.lb.	11.375	11.375
No. 1. 15 to 18 ffa. 40-45c.t.lb.	10.50	10.50
No. 2. 22 to 23 ffa. 40-45c.t.lb.	10.00	10.00
Prime Edible Tallow under 1⅞ ffa. 40-45c.t.N.Y. lb.	8.375	8.375
Tallow acidless. lb.	10.75	10.75
Lard Stearine. lb.	15.00	15.00
Oleo Stearine. lb.	9.50	9.50
Neatsfoot Oil—		
Pure. bbls.-lb.	13.25	- 13.25
Extra. bbls.-lb.	11.375	11.375
No. 1. bbls.-lb.	10.25	10.25
Cold pressed. lb.	17.75	17.75
Fish Oils—		
Menhaden Oil		
Light pressed. gal.	60	60
White. gal.	66	66
Yellow bleached. gal.	64	64
Whale, extra winter bleached. gal.	82	82
Naval Stores—		
Turpentine, N. Y. gal.	58	60.50
Turpentine†. gal.	52	54.50
Rosin, B. N. Y.	$10.00	$10.10
Rosin, F. N. Y. bbl.	$10.15	$10.325
Rosin, B†. bbl.	$ 8.40	$ 8.50
Rosin, F†. bbl.	$ 8.55	$ 8.55
Rosin Oil 1st run. gal.	57	57
Rosin Oil 2nd run. gal.	62	62
Pine Tar—		
Kiln Burnt. bbl.	$16.00	$16.00
Retort. bbl.	$16.00	$16.00

†Savannah, Ga., market.
*Nominal.

Alcohol—Denatured—		
Formula 5		
Bbls. gal.	50.5	50.5
Drums. gal.	43.5	43.5

Care of Small Tools Important, Texas Field Men are Told

Staff Special
HOUSTON, June 17

"ATTENTION to little things make or break a business," says L. J. Daly, Panhandle district field superintendent of The Texas Co. "The big things stick out like a sore thumb and can be observed by all."

The foregoing business truth was used by Mr. Daly in concluding a letter to all the company's producing foreman and tool pushers in his district. This letter was one of a series.

Mr. Daly directed that foreman and tool pushers shall see that men under them "shall carry out our ideas in this matter, and, if he finds that he has a man working under him who does not seem willing to co-operate, he will without hesitation part company with him regardless of other circumstances."

Mr. Daly also wrote in his first letter:

"It has long been accepted as a military axiom that in the last analysis, battles are won or lost and the fate of nations decided by the privates in the ranks, that, regardless of brilliant leadership, if the great mass of subordinates in the lower rank do not function efficiently, failure is inevitable.

"In the fierce business battles the same truth holds, namely, that if the rank and file of a great organization cannot be made to function effectively, that organization, despite a wealth of executive ability and genius in higher places, will not receive the accomplishment and earnings that return to which such ability entitles it.

"In this letter, which is necessarily brief, I wish to call your attention and to dwell on only one topic, applying my remarks with particular reference to roustabouts, pumpers, gang pushers and field foremen, as your duties are such that you directly either make or waste for the company.

"I refer to the use and abuse, the care or lack of care, of what we commonly classify small tools and connections, and to try and impress upon your minds the extremely high cost of all material used in connection with the oil business, and that even the smallest item used costs many times more than would seem to be apparent.

"For example, in passing invoices, I have picked out just a few of the items that are used every day and am including them in this letter to give you an idea of the enormous cost of oil field material. A polish rod clamp costs $1.13, a 2-inch globe valve costs $5.69, a bull rope costs approximately $45, a 24-inch Trimo wrench costs $2.33, a 2-inch 500-lb. pressure gate valve costs $10.45, a 3-inch gate valve costs $18.53, one 6⅝-inch swab rubber costs $9.90, one 10-gallon water can costs $10.55. Every other article which we use in our field work costs in proportion to the few enumerated above.

"The gang pusher and field pusher can, I believe, by constant and untiring observation and instruction, train the roustabout, pumper, tool dresser, etc., to have a proper regard for company material. In other words, if the pumper, for example, wishes to disconnect a 2-inch globe valve and by sticking a piece of pipe on the handle of his wrench or by violent hammering breaks the valve, if he can be brought to the realization that by so doing he has wasted at the present market five barrels of oil, and if the tool dresser can be brought to realize that if he has spikes or rough places in the grooves on his bull wheel or band wheel, that he can destroy in a day a bull rope which costs $45 and which by proper care and attention could be made to last several months, they would both, if they are the kind of men which we endeavor to have in our organization, pay more attention to seemingly unimportant detail, and devote themselves more conscientiously to the conservation of company property."

Even "Pussyfooting" May Be Alarming

DALLAS, June 17.—President J. D. Collett of the Texas division, Mid-Continent Oil and Gas Association, was addressing the first luncheon of the Dallas wildcat committee of that organization at the City Club a few days ago, when he told a story illustrating hysteria.

A certain man, according to Mr. Collett, had been ill in bed for several days and had been suffering mentally especially from the restraint of his confinement. He had been making the air blue with his remarks until a crisis was reached when he saw the family cat walking across the carpet.

"G—D—it, Tabby," the man swore, as he raised himself up in bed, "don't stamp your feet like that."

The story was told to illustrate Mr. Collett's expressed thought that the oil industry should not parade its troubles, whether actual or imagined, to the general public.

J. Edgar Pew, vice-president and general manager, Sun Oil Co., Dallas, was host at the luncheon. Hereafter luncheons will be "Dutch treats," as the committee as yet has no financial arrangements.

The Dallas wildcat committee is patterned after a similar group affiliated with the California Chamber of Mines and Oil, Los Angeles. R. A. Wilson, Guiberson Corp., is the Dallas chairman. Other committee members are Capt. J. F. Lucey, Lucey Petroleum Corp.; John G. (Jack) Pew, land department, Sun Oil Co.; W. L. Todd, production manager, Simms Oil Co.; W. H. Francis, counselor, Magnolia Petroleum Co.; Robert R. Penn, Independent operator; R. A. Crawford, Lone Star Gas Co.; Charles Fitzgerald, Pure Oil Pipe Line Co.; J. F. Laney, secretary, Texas division, Mid-Continent Oil and Gas Association; Robert B. Whitehead, chief geologist, Atlantic Oil Producing Co.

It is proposed to organize other wildcat committees among oil men in Texas towns such as Fort Worth, Houston, San Angelo and elsewhere.

Marland Sell $30,000,000 Short Term Notes

NEW YORK, June 17.—The $30,000,000 of Marland Oil Co. 5 per cent gold notes which were offered late last week were sold at once, the banking syndicate that underwrote them, announced. The syndicate was comprised of J. P. Morgan & Co., First National Bank of New York, National City Co., and F. S. Smithers & Co.

The Marland notes are serial and mature in two to five years. Prices were fixed to yield 5.30 per cent on the two-year notes; 15.35 on the three-year; 5.45 on the four-year, and 5.50 on the five-year.

Doherty Official Promoted

NEW YORK, June 18.—William Alton Jones, for the last two years chairman of the executive committee of Henry L. Doherty & Co., June 15 was elected first vice-president of Cities Service Co. The president of the company is Henry L. Doherty. Mr. Jones has been with the Cities Service organization since 1912. Until he came to New York in 1921 he was at Joplin, Mo., where he served as treasurer of the Empire District Electric Co., and associated companies. Mr. Jones is an officer or director of some 50 companies. At the recent convention of the National Electric Light Association at Atlantic City he was elected a vice-president.

Pure Oil Co.—All directors and officers re-elected at annual meeting.

Pan-American Western Petroleum Co.—Directors and officers re-elected at annual meeting.

Transactions In Oil Shares on New York Stock Exchange

1926 High	1926 Low	1927 High	1927 Low	Listed Capital	Par Value	Stocks	Div. Rate	Last Paid	Transactions Week Ended June 18 Sales	First	High	Low	Last	Change
32⅞	24¼	37⅝	27⅝	(sh) 915,675	N.P.	Amerada Corp.	50cQ	Apr. 30, 27	5,400	31¾	31⅞	31¼	31½	— ¼
74	39¼	62½	35⅛	(sh) 209,180	N.P.	American Republics	.....	.....	5,000	57	59	54½	56	— 2
59¼	44¾	50¼	42	$ 56,000,000	$25	Associated Oil	50cQ	Mar. 25, 27	100	42	42	42	42	— 1¼
128⅜	97	125⅝	107	50,000,000	100	Atlantic Refining	$1Q	June 15, 27	14,300	123¾	124¼	118	118⅛	— 6
120	115½	118	115½	20,000,000	100	do pfd.	$1¾Q	May 2, 27	300	116½	116½	116¼	116¼	— ¼
33½	23½	35½	23⅛	25,000,000	25	Barnsdall Corp. A	62½cQ	Apr. 5, 27	24,100	27⅞	28¾	26¾	28¾	+ ¾
29½	22½	32½	22	3,840,275	25	do B	62½cQ	Apr. 5, 27	2,000	26	27½	26	27⅜	+ 1½
68⅛	29¾	32⅞	21½	49,505,175	25	California Petroleum	50cQ	June 1, 27	5,200	24⅜	24⅜	23⅝	24¼	— ⅛
94¼	50	96¾	72½	24,242,500	100	General Asphalt	.....	.....	11,400	76	77⅝	75	76½	— ⅛
140½	94⅞	144⅞	113	6,949,200	100	do pfd.	$1¼Q	June 1, 27	200	116	116	116	116	— 2¾
72	50¼	166½	60¼	25,000,000	100	Houston Oil	.....	.....	94,600	161¾	162	151¾	155⅝	— 6
84	19⅝	32¾	17⅜	(sh) 500,000	N.P.	Independent Oil & Gas	25cQ	Apr. 18, 27	1,800	19¼	19½	19	19¼	+ ¼
13¾	7¼	11⅛	7½	$ 3,280,340	$10	Indian Refining	.....	Dec. 15, 20	1,800	8⅜	8⅝	8¼	8¼	— ⅛
12½	8	10⅞	7⅜	4,550,110	10	do ctfs.	.....	.....	1,400	8½	8½	8¼	8⅜	— ⅛
104	90	112	102	2,296,400	100	do pfd.	.....	Dec. 15, 21	100	110	110	110	110	— ⅜
....	....	....	....	....	....	Kansas & Gulf	.....	.....	....	....	....	....	....	....
24½	19⅛	32½	20½	(sh) 3,988,044	N.P.	Lago Oil & Transport	75cQ	May 1, 27	24,500	26½	30⅞	26½	29½	+ 2¾
19⅞	12	18⅛	11½	(sh) 1,135,662	N.P.	Louisiana Oil Refining	.....	.....	3,100	12⅜	12⅜	12	12⅛	— ⅜
98	93	97	90	$ 4,000,000	$100	do pfd.	$1⅜Q	May 16, 27	200	91¾	91¾	91¾	91¾	0
28⅞	16⅛	22¾	13¼	(sh) 330,000	N.P.	Maracaibo Oil	.....	.....	300	14½	14½	14	14	— ½
63⅜	49¼	58½	35¼	(sh) 2,308,064	N.P.	Marland Oil Co.	$1Q	Mar. 31, 27	41,800	35⅝	36⅜	†35¼	36	0
250	225	250	200	$ 45,942,800	$100	Mexican Petroleum	$3Q	Apr. 20, 27	.....	....	....	....	....	.....
....	....	....	....	12,000,000	100	do pfd	$2Q	Apr. 20, 27	.....	....	....	....	....	.....
13¾	6	9¼	5	(sh) 945,939	N.P.	Mexican Seaboard	.....	Nov. 15, 24	1,000	5⅝	5⅝	5½	5½	0
37	27½	39⅜	29	(sh) 1,357,800	N.P.	Mid-Continent Petroleum	75cQ	May 1, 27	9,600	31¾	31⅞	31	31¼	0
104¼	90	105	97	$ 6,718,000	$100	do pfd.	$1¾Q	June 1, 27	.....	....	....	....	....	.....
2½	¾	3¼	1⅝	24,726,130	10	Middle States	.....	July 1, 23	10,900	2¾	2¾	2½	2⅝	0
1⅜	½	2¼	1⅜	5,074,090	...	do ctfs.	.....	.....	1,100	2	2	1⅞	1⅞	— ⅛
2¼	1	1⅞	1	(sh) 3,500,000	N.P.	Pacific Oil	.....	.....	13,100	1⅛	1½	1⅛	1¼	+ ⅛
76½	56½	65⅞	56⅛	$ 48,307,400	$ 50	Pan American P. & T.	$1.50Q	Apr. 20, 27	6,000	56½	59	56⅜	58⅜	+ 2⅛
78⅜	56⅞	66⅜	56⅜	121,096,950	50	do B	$1.50Q	Apr. 20, 27	32,700	57¼	60¼	56½	59	+ 1¾
46	30	37⅞	19	(sh) 400,000	N.P.	Pan American Western B.	.....	Jan. 30, 27	1,700	21	22	21	21⅝	+ ⅞
62	41½	187⅝	8	(sh) 198,770	N.P.	Panhandle P. & R.	.....	.....	2,000	10¼	10½	9⅜	10	0
99⅜	51	83¾	64	$ 2,935,200	$100	do pfd.	.....	July 2, 23	.....	....	....	....	....	.....
57⅜	40	60¼	39¾	(sh) 2,406,796	N.P.	Phillips Petroleum	75cQ	Apr. 1, 27	32,900	42⅞	41⅞	42½	43⅞	+ ⅞
1⅞	½	1	½	$ 29,622,925	$ 25	Pierce Oil Corp.	.....	.....	7,300	⅞	⅞	⅞	⅞	0
27⅛	11⅛	21⅞	13½	15,000,000	100	do pfd.	.....	Feb. 1, 22	1,000	20	*21⅞	20	21½	+ 1½
7	2¼	4⅜	2½	(sh) 2,500,000	N.P.	Pierce Petroleum	.....	.....	25,300	3⅞	*4⅜	3⅝	4⅜	+ 1⅛
20¾	11	33⅞	16¾	$ 11,467,850	$50	Producers & Refiners	.....	Sept. 15, 23	10,300	29¼	29⅞	28	28¾	— ¾
41¾	30¾	50	36⅞	2,845,350	50	do pfd.	.....	May 1, 25	140	44	44½	41⅝	44½	+ 1¼
31	25¼	33½	26	75,929,250	25	Pure Oil Co.	‡37½cQ	June 1, 27	8,700	26⅝	27	26½	26⅞	+ ⅛
112¾	106	114	111⅜	13,000,000	100	do 8% pfd.	$2Q	Apr. 1, 27	200	112⅝	112⅝	112½	112½	+ ⅛
57⅜	47⅜	58	48½	(sh) 628,559	13.40	Royal Dutch, N. Y. shares	$133¼	Jan. 28, 27	1,100	49⅛	49½	49	49½	+ ½
40⅝	40½	47⅞	43⅜	(sh) 83,152	F2	Shell Transport & T	96.7c	Jan. 17, 27	200	45½	45½	45½	45½	+ ¼
31	24	31¾	25	(sh) 10,000,000	N.P.	Shell Union Oil	35cQ	Mar. 31, 27	3,500	27⅜	27⅜	27½	27¾	0
114	103	111	107½	$ 18,350,400	$100	do pfd.	$1½Q	May 16, 27	.....	....	....	....	....	.....
28⅝	15⅛	22¾	15¾	7,208,080	10	Simms Petroleum	37½cQ	Apr. 1, 27	3,400	16¼	16⅜	16⅛	16⅜	+ ⅜
24⅞	16¾	22⅜	16½	(sh) 4,501,224	N.P.	Sinclair Consolidated	.....	May 31, 24	13,400	17⅛	17⅜	17	17¼	+ ¼
99½	90	103¼	97	$ 17,210,000	$100	do pfd.	$2Q	May 16, 27	300	100	100	99½	99½	— ½
37⅛	26⅝	37⅜	25	27,398,500	25	Skelly Oil Co.	50cQ	June 15, 27	5,500	27½	27¾	27¼	27⅝	— ⅛
63⅜	52⅝	60¾	50⅜	(sh) 13,016,434	N.P.	S. O. California	‡62½cQ	June 15, 27	6,100	54⅜	54⅝	53½	53½	— 1¼
46⅜	37⅜	41⅜	35⅛	$ 604,484,600	$25	S. O. New Jersey	‡25cQ	June 15, 27	27,300	37⅛	37¼	36⅜	36⅞	— ⅜
33¼	32½	34⅛	30⅜	421,498,275	25	S. O. New York	40cQ	June 15, 27	22,400	30½	30⅝	30¼	30⅝	+ ⅛
41⅝	30⅛	34⅞	30	(sh) 1,171,474	N.P.	Sun Oil	25cQ	June 15, 27	.....	....	....	....	....	.....
5¼	1	6½	3¾	(sh) 1,121,368	N.P.	Superior Oil Corp.	.....	Dec. 20, 20	.....	....	....	....	....	.....
57⅞	53⅛	58	45	$ 179,752,525	25	The Texas Corp.	75cQ	Apr. 1, 27	17,600	48	49⅛	48	48¼	— ⅛
19½	12	18⅞	12	8,380,340	10	Texas Pacific Coal & Oil	15cQ	Mar. 31, 27	39,200	14¾	16⅜	14	15½	+ ½
39¼	37	29⅛	22⅞	(sh) 2,157,991	N.P.	Tide Water Oil Co.	37½cQ	Mar. 31, 27	12,600	23	23	23	23	0
103	87¼	89¾	87	$ 20,705,100	$100	do 5% pfd.	$1.25Q	May 16, 27	500	88⅛	88⅛	88	88	0
....	....	19⅛	15½	(sh) 4,791,410	N.P.	Tide Water Associated	30cQ	May 2, 27	9,400	17⅞	17⅞	17⅛	17½	— ½
....	....	90¼	89	$ 76,347,100	$100	do pfd.	$1.50Q	Apr. 1, 27	1,100	89⅞	89⅞	†89	89½	— ½
5½	3	7½	3¾	(sh) 3,742,029	N.P.	Transcontinental Oil	.....	.....	311,700	7	9¾	6⅝	9¼	+ 2½
58⅜	37¼	56½	39⅜	$ 40,741,725	$ 25	Union Oil of California	50cQ	May 10, 27	5,500	43	43	42¼	42¼	— ⅜
120⅜	84¼	115½	94	30,734,000	100	Union Tank Car Co.	$1¼Q	June 1, 27	300	112¼	114½	112¼	113	— 1
29¾	25½	27½	22	(sh) 490,000	N.P.	White Eagle Oil & Refining	50cQ	Apr. 20, 27	200	23½	23½	23½	23½	0

*New High †New Low xEx-Dividend ‡Also extras Total Sales 887,340

Cleveland Stock Market

June 17

	Par Value	Bid	Asked	Last Sale
Canfield Oil Co.	100	.....	.....	110
do pfd.	100	100½	.....	100
Fred G. Clark Co.	10	....	3¾	3⅜
National Refining Co.	25	36½	37¼	36¾
do pfd.	100	x128	....	134
Paragon Refining Co.	25	8⅝	9	8½
do pfd.	100	85¼	87	83

x Ex dividend.

Oil Dividends

Gulf Oil q.	37½c	July 1	June 20
Lion Oil q.	50c	July 27	June 20
Mexican Pet. q	$3	July 20	June 30
do pfd. q.	$2	July 20	June 30
Mountain & Gulf q.	2c	July 15	June 30
domextra	1c	July 15	June 30
Pan Amer. P & T q.	$1.50	July 20	June 30
do B q.	$1.50	July 20	June 30
Washington Oil q.	$1	June 20	June 14
Westland Oil q.	$2	June 30	June 20
White Eagle q.	50c	July 20	June 30

Crouse-Hinds Co., Syracuse, N. Y., has put out bulletins G-2 and 308 and folder No. 51, describing and illustrating respectively, groundulets and other safety circuit devices, floodlight projectors and obround condulets.

PITTSBURGH STOCK EXCHANGE

1926 High	1926 Low	1927 High	1927 Low	Par Value	Stocks	Transactions Week Ended June 17 Sales	First	High	Low	Last	Ch'ge
8½	6⅜	...	...	N.P.	Andes Petroleum	.....	....	....	....	....	.....
8½	5¾	8¼	6⅞	$ 10	Arkansas Nat. Gas.	3,545	7⅞	7⅞x	7¼	7¼	— ½
90½	79¾	98⅜	84	100	Columbia Gas.	45	95	95¼	95	95¼	+ 1
101⅜	95	107	100	100	do pfd.	200	105	106	106	105	0
17	12½	15	9½	10	Devonian Oil	84	10½	10½	10½	10½	— ⅛
116½	112	116¾	115	100	Duquesne Lt. 7% pfd.	.....	....	....	....	....	.....
10	5⅛	12¼	6	N.P.	Houston Gulf Gas.	85	10¾	10¾	10¾	10¾	— ⅜
46	39	46¼	37¼	$ 25	Lone Star Gas	1,757	43¾	43⅞	43	43	— ¾
47⅜	33⅛	22¾	22¼	25	Ohio Fuel Corp.	.....	....	....	....	....	.....
47½	42	21⅝	21	....	do ctfs.	.....	....	....	....	....	.....
6¾	5	6	5	....	Ohio Oil & Gas	.....	....	....	....	....	.....
34	21	21	21	25	Oklahoma Nat. Gas.	.....	....	....	....	....	.....
21	19¼	23⅜	20¼	....	do ctfs.	180	23	23	23	23	+ 2
5⅜	3⅛	3⅞	3¼	5	Pittsburgh Oil & Gas	.....	....	....	....	....	.....
10	7½	8	6	10	Salt Creek Cons.	50	6⅜	6⅜	6⅜	6⅜	— ½
27	8	26½	17	10	Tidal Osage	6,592	20¼	23½	20¼	23	— 2
45	40	43	41	N.P.	Waverly Oil Wks. "A"	100	42½	42½	42½	42½	0

*New high †New Low xEx-Dividend

PITTSBURGH CURB EXCHANGE

1926 High	1926 Low	1927 High	1927 Low	Par Value	Stocks	Transactions Week Ended June 17 Sales	First	High	Low	Last	Ch'ge
3⅜	2½	3½	2¾	$ 5	Columbia Synd.	.....	....	....	....	....	.....
20	.06	.18	.18	5	Duquesne Oil	.....	....	....	....	....	.....
22	22	....	....	10	Forest Oil	.....	....	....	....	....	.....
91½	85	94	88	25	Gulf Oil Corp.	2,100	91¼	92½	91¼	92½	+ 3
79	79	105	93	100	Houston Gulf Gas pfd	.....	....	....	....	....	.....
12	7½	10¾	6¼	N.P.	Leonard Oil & Dev.	.....	....	....	....	....	.....
1⅝	1⅝	....	....	N.P.	Mountain & Gulf	.....	....	....	....	....	.....
30¼	29	32	31¼	$ 25	Oklahoma Gas	.....	....	....	....	....	.....
....	....	1.20	1.00	....	Oklahoma Eastern	.....	....	....	....	....	.....
2	.15	2.70	1.10	10	Omar Oil & Gas	2,200	1.50	1.50	1.25	1.25	— .25
....	....	2¼	1¾	....	Pittsburgh Oil Dev.	.....	....	....	....	....	.....
2	1¾	2¼	2¼	5	do pfd.	.....	....	....	....	....	.....
33½	20	31	23	10	Plymouth Oil	100	23	23	†23	23	— 1
7	3	6	5½	5	States Oil	.....	....	....	....	....	.....
3½	2	3⅝	2	1	Texon Oil & Land	100	2⅛	2⅛	2⅛	2⅛	+ ⅛
25¾	8	23¾	18	10	TidalOsage(non-vtg).	900	21¾	22	21½	21⅞	+ 2⅜

Standard Oil Stock Traded in New York

1926 High	1926 Low	1927 High	1927 Low	Outstanding Capital	Par Value	Stocks	Div. Rate	Last Paid	Transactions Week Ended June 17 Sales	First	High	Low	Last	Ch'ge
21	16⅜	21⅝	18⅜	£ 4,000,000	£ 1	Anglo-American Oil	36⅜cS.A.	Jan. 4, 27	200	19	19	19	19	0
20¼	16½	20½	17⅛	.....	£ 1	do ctfs. non-voting	.....	.....	100	18½	18½	18½	18½	0
2¼	.75	1¼	.75	(sh) 500,000	N.P.	Atlantic Lobos	.....	.....	200	....	80	76	76	—24
5	2⅞	4¼	2½	$ 10,000,000	$ 10	do pfd.	.....	.....	.....	.....	.....	.....	.....	.....
75	65	69	50	1,000,000	25	Borne Scrymser	$1S.A.	Apr. 15, 27	50	58¼	63	58¼	60	+ 5
59½	42	59	45	10,000,000	50	Buckeye Pipe Line	$1Q	June 15, 27	380	58	59	57	57	— 2
82½	65	115	76½	3,000,000	25	Chesebrough Mfg.	$1Q	Mar. 31, 27	400	110	110	109½	110	0
25⅞	17½	22⅝	17⅜	38,805,260	10	Continental Oil	25cQ	June 15, 27	3,700	17⅞	18	17¾	18	0
137	102	137	89	3,000,000	100	Cumberland Pipe Line	$2Q	June 15, 27	100	93	93	93	93	0
63¾	43	57	47	5,000,000	100	Eureka Pipe Line	$1Q	May 2, 27	50	57	*57	57	57	+ 1
32½	9⅛	13½	7½	16,000,000	100	Galena Signal Oil	.....	June 30, 25	.....	.....	.....	.....	.....	.....
94½	35	59¾	35	4,000,000	100	do new pfd.	.....	June 30, 26	.....	.....	.....	.....	.....	.....
97½	40	60⅛	43½	2,000,000	100	do old pfd.	.....	June 30, 26	10	43½	43½	43½	43½	0
99⅝	52	62¾	54	73,117,577	25	Humble Oil & Refining	‡30cQ	Apr. 1, 27	8,300	58⅜	59½	57½	59¼	+ ⅜
144½	125¼	150	123¾	20,000,000	100	Illinois Pipe Line	$6S.A.	Dec. 15, 26	750	145	145	144	144½	— 1½
39¾	32½	47	37¾	(sh) 6,491,952	N.P.	Imperial of Canada	‡25cQ	June 1, 27	3,800	43¾	44	43⅜	43⅝	+ ⅛
70	54¼	72½	61	$ 5,000,000	$50	Indiana Pipe Line	$1Q.	May 14, 27	800	70½	70½	68½	68½	— 1½
35¼	28¾	34⅞	28½	(sh) 7,118,138	N.P.	International Petroleum	25c	Nov. 15, 26	9,900	30¾	30¾	29⅜	29⅞	— ⅝
20¾	12½	17	13½	$ 6,362,500	$12½	National Transit Co.	25cQ	June 15, 27	1,000	15⅞	15⅞	15	15⅛	— ⅞
51½	27½	37	31¼	5,000,000	100	New York Transit	.....	July 15, 26	250	36	*37	36	37	+ 1
80½	64	91	70	4,000,000	100	Northern Pipe Line	$3S.A.	Jan. 1, 27	900	86½	91	86½	87½	— 3½
67⅝	55¾	64¼	52	60,000,000	25	Ohio Oil Co.	‡50cQ	June 15, 27	7,600	57	59¼	56¾	59⅛	+ 2⅛
24¾	15	31	12	10,000,000	25	Penn Mex. Fuel	.....	May 21, 25	1,900	27	29⅞	26⅞	29	+ 2
60¼	48	55½	45⅝	60,000,000	25	Prairie Oil & Gas	50cQ	May 31, 27	2,400	48¾	49	48	49	+ 1
137½	122¼	185	132	81,000,000	100	Prairie Pipe Line	$2.50Q	Apr. 30, 27	1,000	170	*185	170	182½	+11½
220	184½	201½	180	4,000,000	100	Solar Renning	$5S.A.	Dec. 20, 26	20	180	180	180	180	— 4
27	21	27¼	15½	5,000,000	50	Southern Pipe Line	.....	Mar. 1, 26	.....	.....	.....	.....	.....	.....
50	34⅜	41½	34½	20,000,000	25	South Penn Oil	50cQ	Mar. 31, 27	400	36	36	35⅛	35⅛	— 1⅜
57	49	77	55½	3,500,000	100	South West Pa. Pipe Lines	$1Q	Apr. 1, 27	.....	.....	.....	.....	.....	.....
70⅛	60⅛	74¼	64¾	228,415,463	25	S. O. Indiana	‡62½cQ	June 15, 27	16,200	67½	67⅞	66⅝	67⅛	— ⅜
36½	16½	20⅞	15⅝	8,000,000	25	S. O. Kansas	.....	June 16, 24	100	16	16	16	16	— ⅛
134¾	108	122¼	111⅜	17,012,599	25	S. O. Kentucky	$1Q	Mar. 31, 27	1,200	113	113¼	112½	113¼	+ ¼
51⅜	42	49½	45	4,559,850	25	S. O. Nebraska	62cQ	June 20, 27	.....	.....	.....	.....	.....	.....
672	288	86	73	14,000,000	25	S. O. Ohio	$2½Q	Apr. 1, 27	550	75½	76	75	76	— 1½
120½	116½	122	117¼	7,000,000	100	do pfd.	$1¾Q	June 1, 27	.....	.....	.....	.....	.....	.....
23	15½	17⅝	14½	861,466	25	Swan Finch Co.	.....	Nov. 1, 19	.....	.....	.....	.....	.....	.....
109¾	90¼	134	95⅛	62,470,809	25	Vacuum Oil	‡50cQ	June 20, 27	14,800	126½	131	124	129¼	+ 3½

* New high †New low xEx dividend ‡Also extras.

New York Curb Market

1926 High	1926 Low	1927 High	1927 Low	Par Value	Stocks	Transactions Week Ended June 17 Sales	First	High	Low	Last	Change
6¾	45	2⅞	.76	$5	Amer. Con. Oilfields	20,500	86	95	85	90	0
14½	4	7½	3¾	N.P.	Amer. Maracaibo	2,100	3⅞	3⅞	3½	3⅞	0
8⅜	5¾	8⅝	6¾	$10	Arkansas Nat. Gas.	700	7½	7½	7⅜	7½	0
20⅜	14⅜	20½	15½	N.P.	Beacon Oil	.....	.....	.....	.....	.....	.....
85¼	60	27	20½	N.P.	British American	.....	.....	.....	.....	.....	.....
28⅜	9¼	28¾	14⅜	25c	Carib Syndicate	1,700	16¾	17⅜	16¼	17⅜	+ 1
....	....	26	16½	....	do ctfs. of deposit	.....	.....	.....	.....	.....	.....
51	37½	58¾	40¼	$20	Cities Service	13,000	46¾	46⅞	46¼	46½	— ⅜
92½	82⅜	92¼	87	100	do pfd.	1,400	89½	89½	88¾	88¾	— ½
8⅜	7⅜	8½	7⅜	10	do pref. B	600	8⅜	8⅜	8¼	8¼	— ⅛
25¼	19	29¼	23½	10	do bankers' shares	.....	.....	.....	.....	.....	.....
3½	1¾	3⅞	1¾	$1	Colombia Syndicate	7,300	2	2¼	2	2⅛	— ⅛
10⅜	8⅜	9½	8¼	10	Consolidated Royal	.....	.....	.....	.....	.....	.....
16	10	14⅞	9⅞	N.P.	Creole Syndicate	21,500	10	10½	9⅞	10⅛	0
7⅜	1⅛	3	1	N.P.	Crown Central	.....	.....	.....	.....	.....	.....
8½	½	12	4¾	....	Darby Petroleum	400	7¾	7¾	7½	7½	+ ½
....	....	11½	7	....	do trust ctfs.	.....	.....	.....	.....	.....	.....
4	1¾	2½	1¼	N.P.	Derby Oil & Refining	.....	.....	.....	.....	.....	.....
19	13	16¾	10	N.P.	do pfd.	300	...	10⅛	10	10	— ⅜
7½	2½	3¾	1⅜	N.P.	Gibson Oil	5,400	2	2⅛	1¾	1⅞	— ¼
2	.63	1⅜	40	N.P.	Gilliand ctfs.	.....	.....	.....	.....	.....	.....
98	82	96½	86¼	$25	Gulf Oil Corp.	4,600	92¾	93	91⅛	92	+ ⅞
3⅜	1	2¼	1¼	N.P.	Kirby Petroleum	.....	.....	.....	.....	.....	.....
12¼	5¾	10⅞	6	N.P.	Leonard Oil & Dev.	800	.....	7⅜	7	7⅜	+ ¼
27	20	27½	22	N.P.	Lion Oil & Refg.	800	23⅞	24	23⅞	23⅞	— ⅛
46	31	46½	37	$25	Lone Star Gas	300	43¾	44	42⅝	44	+ ⅝
2⅜	2	2⅞	1¼	1	Magdalena Synd.	2,000	1⅜	1⅜	1¼	1¼	— ⅛
5½	1⅜	3	1½	10	Mexican-Panuco	.....	.....	.....	.....	.....	.....
1¾	1¼	1½	1	1	Mountain & Gulf	.....	.....	.....	.....	.....	.....
26	23	26⅞	22¾	10	Mountain Producers	2,400	24⅞	24⅞	24	24¼	— ⅜
6¾	5	5⅞	4⅞	5	New Bradford	1,800	5	5	5	5	0
11¾	2	6¼	4	10	New England Fuel	.....	.....	.....	.....	.....	.....
17	9¼	16	9¼	1	New Mex. & Ariz.	12,900	12¼	12¾	11½	12	— ¾
17	8	13¼	9	25	New York Oil	6,600	10½	*13¼	10½	13	+ 2½
12⅛	8¾	12⅜	11⅜	N.P.	North Cent. Texas	.....	.....	.....	.....	.....	.....
44¾	33	.....	.....	$25	Ohio Fuel Corp.	.....	.....	.....	.....	.....	.....
33	28½	27½	21¼	....	Okla. Nat. Gas ctfs.	.....	.....	.....	.....	.....	.....
10⅛	5⅞	9⅜	5	N.P.	Pandem	5,000	5¾	6	5½	5½	— ½
12¼	11¾	12⅛	9¾	N.P.	Pantapec Oil	900	10¼	10¼	9¾	10⅛	— ⅛
2¾	.20	.37	.26	N.P.	Peer Oil Corp.	.....	.....	.....	.....	.....	.....
22¾	12	13⅛	6¾	$10	Pennok Oil	900	7½	7½	†6¾	6¾	— ½
38	14⅛	24⅜	16	25	Red Bank Oil	.....	.....	.....	.....	.....	.....
30¼	12	15½	4⅞	N.P.	Reiter-Foster	400	5⅜	5⅜	†4⅜	4⅞	— ⅞
27½	22	27½	15	$25	Richfield Oil	.....	.....	.....	.....	.....	.....
7½	4½	7	4½	N.P.	Ryan Consolidated	500	6	6	5¾	5¾	— ¾
10	7½	8	6	$10	Salt Creek Cons.	600	6⅝	6⅝	6½	6½	0
36	26⅞	32	27¼	10	Salt Creek Prod.	700	29½	29½	29	29	— ½
4⅜	1⅛	7	3	5	Savoy Oil	600	3¾	3¾	3⅛	3¼	— ⅛
27	7⅝	26½	17	10	Tidal Osage	18,300	20⅞	25	20⅞	23¾	+ 2¼
25¾	7⅝	23¾	15	10	do non-voting	60,400	20⅛	23¾	20⅛	23	+ 1½
....	....	83	63½	100	Transcontinental pfd.	1,150	79	80	77	80	— 1
3	4⅛	7⅜	4¼	5	Venezuelan Petro.	1,400	4⅜	4½	4¼	4½	— ⅛
30⅛	23⅞	27⅞	23½	N.P.	Warner-Quinlan	.....	.....	.....	.....	.....	.....
31⅛	22	32⅝	20⅜	N.P.	Wilcox Oil & Gas	1,200	23¾	23¾	23½	23½	— ⅛
9½	4⅜	8	5¼	$1	Woodley Petroleum	1,600	6¾	7	5½	6⅞	0

*New High †New Low xEx-Dividend

NEW YORK BONDS

Week Ended June 17

Amer. Rep. Deb. 6s	99½	99½	99½	— ½
Assoc. Oil gold 6s	102¾	102½	102⅝	— ⅛
Atlantic Refg. Deb. 5s	101⅛	100¾	100¾	— ¼
Barnsdall Corp. 6s	100½	99¼	99⅜	— ⅛
Barnsdall Corp. 6s ex war.	90¾	90	90	— ½
Cal. Pet. 5s	93¾	93¼	93¾	—0
Cal. Petrol. 5½2s	98	97¾	97⅞	+ ⅛
Empire Gas & Fuel 7½2s	110	109⅞	109⅞	0
Empire Gas & Fuel 6½2s	105½	105⅜	105⅜	0
Gen. Petroleum 5s	100¾	100½	100½	0
Humble Oil & Refg. 5½2s	102⅜	101¾	101¾	— ⅛
Humble Oil 5s wi	97⅞	97½	97¾	— ¼
Mid-Cont. Pet. 6½2s	104¼	103¾	104	0
Pan-Amer. P & T 7s	105¼	105⅛	105⅛	— ⅛
Pan-Amer. P. & T. 6s	103¾	103	103⅜	+ ⅛
Pan-Amer. P. & T. 6s	93¾	93	93½	— ½
Pierce Oil deb. 8s	104½	102⅛	102⅛	—2⅜
Prod. & Refnrs. 8s	111	111	111	0
Simms Pet. cvt. 6s	98½	98½	98½	— ¾
Sinclair Con. Oil Col. 7s	100	99½	99¾	— ¼
Sinclair Con. Oil Con. 6½2s	96	95	95½	+1¼
Sinclair Con. Oil 6s	99⅞	99⅝	99⅞	0
Sinclair Crude Oil 6s	100¼	100	100⅛	+ ⅛
Sinclair Pipe Line sf 5s	93½	92½	93⅛	— ⅜
Standard Oil N. Y. 4½2s	94½	94	94⅜	+ ⅛
Standard Oil N. J. deb. 5s	102½	102	102½	+ ¼
Union Oil of Cal. 6s-A	107½	107½	107½	— ½
Union Oil of Cal. 1st 5s	101¾	101¾	101¾	+ ¼
Union Oil of Cal. 5s-C	97⅞	96¾	96⅞	— ⅛

NEW YORK CURB BONDS

Week Ending June 17

	High	Low	Last	Ch'ge
Beacon Oil 6s '36	98¾	98⅜	98¾	+ ¼
Cal. Pet. 5s	.....	.....	.....	.....
Cities Serv. 5s '56	91¾	91¾	91¾	0
Cities Serv. 6s '66	101⅛	101	101	0
Empire Oil 5½2s wi	96⅛	96	96	0
Galena S. O. 7s '30	92	90¾	91⅞	+ ⅝
General Pet. 6s '28	101⅛	101	101	+ ¼
Gulf Oil 5s '37	100	99⅞	99⅞	+ ⅛
Gulf Oil 5s '47	99	98⅛	98⅛	— ⅞
Indepen. Oil 6s '39	99⅛	99	99	0
Phillips Pet. 5½s	99¼	99¼	99¼	0
Pure Oil 6½2s '33	104	103¼	103¼	— ¾
Richfield Oil 6s wi '41	93½	93½	93½	— ¼
Skelly Oil 5½2s '39	95¼	94	96	0
S. O. N. Y. 6½2s '33	104¾	104½	104¾	+ ¼
Sun Oil 5½2s '39	100⅜	100	100	— ½
Tidal Osage 7s '31	.....	.....	.....	.....
Trans. Cont. Oil 7s '30	111	102	111	+8
United Oil Prod. 8s '31	76	75¾	76	+ ¼

Lion Oil Refining Co.—Regular quarterly dividend of 50 cents a share declared but extra paid in last two quarters was omitted.

Oil Industry Goods Make Largest Export Gains

WASHINGTON, June 18.—For the eleventh consecutive quarter year, the United States in the first quarter of 1927 exported more than $1,000,000,000 worth of goods, according to "Our World Trade", just published by the Foreign Commerce Department of the Chamber of Commerce of the United States. Sales in the first quarter of 1927 were more than sales in the first quarter of 1926.

Among the products that showed large gains in quantity of exports in the January-March quarter this year, are petroleum asphalt, which gained 153 per cent, and oil well machinery, which gained 85 per cent over exports in the first quarter of 1926. Exports of other petroleum products "showed up well" according to the booklet, except kerosene, which decreased 18 per cent.

Among the leading petroleum products' exports which gained both in quantity and value are: gasoline, naphtha and other finished light products, 6 per cent gain in quantity, and 3 per cent in value; lube oils, 5 per cent in quantity and 2 per cent in value; gas and fuel oil, 22 per cent in quantity and 19 per cent in value.

Imports of all leading commodities declined during the first quarter of this year, as compared with a year ago, and prices were lower. Among 14 leading products showing noteworthy increases in value, is gasoline, which gained 35 per cent. Gasoline, naphtha and other finished light products also increased 32 per cent in quantity imported.

Crude petroleum imports fell off 16 per cent and topped petroleum 34 per cent, these being listed among the commodities showing heaviest decreases in quantity imported.

Exports of automobiles, parts and accessories, except tires, were $10,000,000 greater than the first quarter of 1926.

To Europe went 47.7 per cent of our total exports during the first three months, showing a gain in value of $36,574,000, or 6.8 per cent over a similar period last year. China was the heaviest exporter and importer to and from the United States, respectively, while Mexican and Nicaraguan exports and imports fell off. Among our principal markets, 47 out of 71 increased their purchases of U. S. goods and of the European countries, Germany led the increases with a gain of $44,165,000 over the three months of the past year, while France showed the severest decline, $24,381,000.

THE OIL INDUSTRY EXCHANGE

Positions Wanted

ASS'T TRAFFIC MANAGER—Have had three years continuous experience handling all duties. Can give good results. Best references. Box 889.

EXECUTIVE—Twenty years experience refining, transportation and marketing petroleum products, thorough knowledge of oils and their uses, especially experienced in all phases of marketing. Highest references. Age 39. Married. Box 890.

SALESMANAGER AND EXECUTIVE open for position July 15. Splendid record in Ohio on Service and Bulk Stations. Box 892.

YOUR CREDITS

Seasoned credit man now employed by refinery available in August.

FACTS

1. Organized and installed present credit department.
2. Stopped credit leaks.
3. Improved collections.
4. Resourceful trained executive can see beyond credit man's desk.

Box 881

Situations Open

LUBRICATING ENGINEER WANTED for foreign service, who has had a very wide practical experience and can furnish satisfactory references; a single man who can read and speak Spanish fluently is preferred. An exceptional position for the right man.

Box 893

TANK CAR SALESMAN

Note: We solicit replies from our own men—we would prefer to promote within the Company.
ORGANIZATION: Large growing Company operating along Atlantic seaboard.
DUTIES: Sell refined and lube oils to jobbing trade.
PERSONAL: Must be 25 to 35 years old; at least high school education.
EXPERIENCE: Must have good general business background with at least five years actual experience selling to jobbers and assisting them in sales.
SALARY: Starting rate depends upon experiences—Future salary based on results.
In answer, give data you would need were you employing a man. A photograph of yourself would be helpful.

Address Box 885

Situations Open

SALESMEN WANTED

Large Refiner requires the services of two first class men of unusual sales ability to solicit the jobbing trade in New York and Northern Pennsylvania for gasoline and lubricating oil.

Excellent opportunity. Straight salary. Applicants must be thoroughly experienced and familiar with the trade in these districts; those with following preferred.

Address Box 894

Business Opportunities

ACTIVE OFFICE EXECUTIVE. Long varied experience with large petroleum corporation, familiar export, domestic shipping, will invest $10,000 to $20,000 with services in established oil company where investment secure. Principals only. Box 891.

A CO-OPERATIVE TULSA BUYING OFFICE

Your orders for petroleum products placed direct with responsible refiners
Small commission charge
Write or Wire for particulars

DALE W. MOORE

532-533 Mayo Bldg., Tulsa, Okla.
Telephones: 3-4177 and 3-4178
L. D. 136

For Sale

EDWARD REISER
Broker in Oil Marketing Properties
Second and Walnut Sts., N.E. Canton, Ohio

Will Sell

A going marketing business in Central Ohio now doing over four million gallons.

Will Buy

One or more marketing businesses in Northern Ohio

For Sale: Motor driven Sharples Super Centrifuges, excellent for recovery of crank case oil or breaking of oil emulsions. Equipped with A. C. Motor. At a very low price. Also a few steam turbine driven machines available.

Acme Oil Corp., 189 No. Clark St., Chicago, Ill.

Miscellaneous

WHAT IT COSTS

For "Position Wanted" advertisements without border—5 cents per word. Minimum cost $1.00. All other classified advertising—10 cents per word. Minimum cost $3.00.

Advertisements set in special type or with border—$4.00 per column inch.

Copy must reach us not later than Friday preceding date of issue.

All advertisements carried on this page are payable in advance.

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With Each Joint Double Sealed

THE SOLE use of a tank is to hold oil—gasoline—or perhaps water, but it is to *hold* the liquid. A little pin hole leak here—a bad seam there *doesn't hold* the contents. Today's business is run on too close a margin to allow any leaks to exist—they increase the shrinkage and make the station look as the owner feels when he sees the leaks.

The best laid plans sometimes go wrong and stations must be moved. Will the tanks stand the racket? Are they strong enough to take the gaff of a drop of a few inches to a few feet (or more) and the jolting from moving. Will it be necessary to test them and make them tight when relocated?

These are a few of the questions that Graver has been answering for the oil men. Our seventy years of experience and close association with the oil men is brought out in the **RIOW** constructed tank.

Let a Graver quotation show you just what we mean by saying "you can buy a **RIOW** tank for the price of ordinary construction.

GRAVER *Founded 1857* ***Corporation***

EAST CHICAGO, INDIANA

NEW YORK	CHICAGO	TULSA	HOUSTON
Grand Cent. Term.	America Fore Bldg.	Atlas Life Bldg.	West Building

Entered as second class matter January 17, 1910 at Cleveland, O., postoffice under act of March 3, 1879, by National Petroleum Publishing Co.

A Full-Flowing FAST Hose Nozzle Valve

No. 448
Type "H" Hose Nozzle Valve
Patented May 18, 1926

THE first essential of a hose nozzle valve is SPEED in delivering gasoline. People *must* have quick service — or they will patronize another station.

You get this speed to the greatest possible degree in the BUCKEYE Type "H" Hose Nozzle Valve. With a slight compression of the operator's hand the disc is lifted completely out of the line of flow and the gasoline rushes into the customer's tank. This valve is designed with the seat tilted at an angle which gives the gasoline a straight shoot through the valve as indicated by the arrows in the illustration.

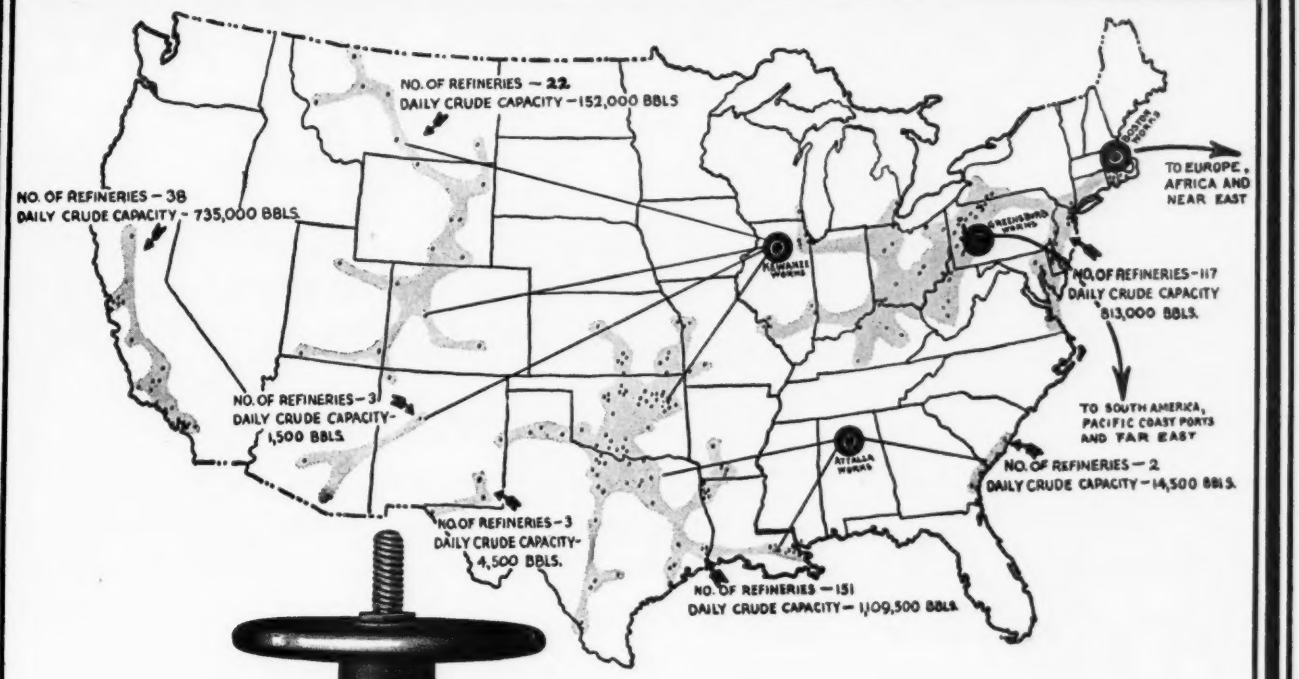
It is fast, dependable, and easily operated. It is made in 1 inch and 1¼ inch sizes. It meets all the requirements of the Underwriters' Laboratories and is furnished as regular equipment by the leading pump manufacturers.

BUCKEYE Products include Hose Nozzle Valves, Foot Valves, Fill Boxes, Gate Valves, Bushings, and many other products of interest to Service Station owners. Write for details.

Buckeye Iron & Brass Works
356 E. THIRD ST. DAYTON, OHIO

Manufacturers of Quality Brass Goods since 1860

BUCKEYE


NO. OF REFINERIES – 22
DAILY CRUDE CAPACITY – 152,000 BBLS
NO. OF REFINERIES – 38
DAILY CRUDE CAPACITY – 735,000 BBLS.
NO. OF REFINERIES – 3
DAILY CRUDE CAPACITY – 1,500 BBLS.
NO. OF REFINERIES – 3
DAILY CRUDE CAPACITY – 4,500 BBLS.
NO. OF REFINERIES – 151
DAILY CRUDE CAPACITY – 1,109,500 BBLS.
NO. OF REFINERIES – 117
DAILY CRUDE CAPACITY 813,000 BBLS.
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TO EUROPE, AFRICA AND NEAR EAST
TO SOUTH AMERICA, PACIFIC COAST PORTS AND FAR EAST
KEWANEE WORKS
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4 WALWORTH FACTORIES STRATEGICALLY LOCATED TO SERVE THE WORLD

Four Walworth plants, at Boston, Massachusetts, Greensburg, Pennsylvania, Kewanee, Illinois and Attalla, Alabama are ideally located for quick and efficient service to all parts of the world where oil is produced and refined. The tracks of some of the greatest railway systems in the United States lie alongside these four plants. On the map above the arrows indicate the easy accessibility of Walworth materials to users in the centers of oil production.

Have you sent for your copy of the Walworth Oil Catalog yet?

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Distributors in Principal Cities of the World
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100% PENNSYLVANIA PURE

Means a Whole Lot to the Oil Marketer and Jobber Today.

The motorist, the manufacturer, in fact all users of lubricating oil are being informed through the national advertising of the Pennsylvania Grade Crude Oil Association the many superior features of 100% pure Pennsylvania oils.

This national educational advertising campaign is having its effect; automobile owners are trying Pennsylvania oils. After once using a quality oil they continue, and there is being created a big demand for a strictly high grade superior quality Pennsylvania motor oil.

Special Process
Motor Oils

Low Cold Test
Low Carbon Content
High Flash & Fire
Triple Filtered
Straight Still
Reduced to the
Proper Viscosity

Are You Getting Any Of This Business

Are you going to be the Oil Man in your town, or just the owner of a filling station.

Do You Want To Handle An Oil that will pull business, and create prestige

PENRECO Quality Oils are like adding several new salesmen to your business

Write for samples and prices

Pennsylvania Refining Company

REFINERS PENNSYLVANIA PETROLEUM PRODUCTS

Karns City, Pa.

They ask for only five
-but finally buy 7 or 8
Watch the average motorist buying gas. He will often ask for only 5 gallons when his tank will hold more.
Does your* distributor make an effort to sell those extra 2 or 3 gallons? He does, if he has the new G. & B. Model T-179 Visible. A simple movement of a lever, an opening of the discharge valve—and the extra gallonage flows to the customer's tank.
No time lost! No trouble! Everybody satisfied! A bigger sale!
Two new G. & B. Visibles offer the oil marketer this G. & B. PROGRESSIVE METHOD OF DELIVERY. Both start delivery with a full bowl of gasoline. Model T-179 is of the mechanical measure type—Model T-176 for control at the nozzle.
Write for interesting literature on either or both pumps.
GILBERT AND BARKER
MANUFACTURING COMPANY
PUMPS AND TANKS FOR THE OIL TRADE
SPRINGFIELD MASS. U.S.A.
*Over 1200 oil marketers are using G. & B. equipment.
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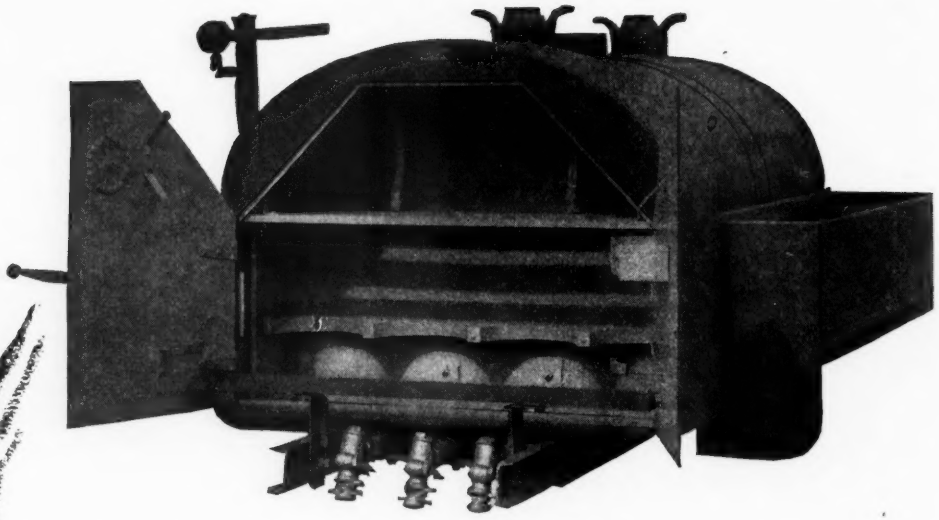
Leader TRUCK TANKS



Over Any Road

LEADER Truck Tanks travel easily over good and bad roads—pavement, cobblestones, rutty dirt and mud roads—because of the new basic principle of construction. Rigidity above the truck springs prevents destructive wearing and working, giving a noticeable sense of security and a material reduction in depreciation.

ANY TRUCK

LEADER Truck Tanks are made to fit any chassis. They are complete in every feature of durability and convenience essential to efficient service and economical investment, carrying an unconditional guarantee. Our Truck Tank catalog—containing complete specifications, gladly sent prepaid upon your request.

LEADER Truck Tanks are designed and constructed for just one purpose—giving owners maximum service at minimum costs. If you are interested enough in Truck Tanks to make any kind of an investigation or comparison, facts will point conspicuously to LEADER.

The LEADER Truck Tank is constructed throughout of Armco Rustless Iron—all Welding being done by the electric arc process. Wood has been replaced by steel wherever possible, bearing in mind, however, to keep the construction as light as would be consistent with strength.

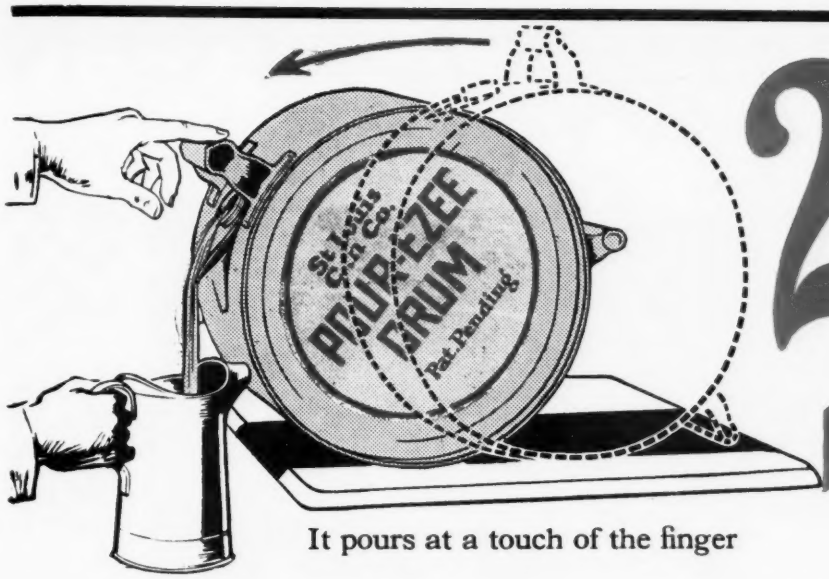
The LEADER Truck Tank is usually built in three compartments, although this feature may be varied to meet your requirements. Each compartment is a tank in its self, with the head stiffened by corrugating to eliminate wearing and cracking the welded seam. Lock washers or grip nuts hold all bolts permanently tight so they can not jar loose. This eliminates the danger of cracking the welding where the pipe connections enter the sump at the bottom of the tank. Leader construction has made the tank and piping a unit independent of the mounting. If the tank should shift the piping moves with it.

The Bucket box is also made of steel providing space for four buckets and two funnels. An added feature is the spring clamping device which holds the buckets rigidly in place and eliminates rattling.

LEADER IRON WORKS

2112 No. Jasper St. Decatur, Ill.

Designers and Builders of Oil Equipment Since 1887



It pours at a touch of the finger

2 Big things the POUR-EZEE Drum does for You!

1. It Increases Oil Sales

Throughout the oil industry the Pour-Ezee Drum is boosting sales even beyond expectations. Men who know the selling power of an attractive and convenient container are praising the Pour-Ezee highly.

The Purchasing Agent of one large company writes, "you have developed a package far superior to any container we have ever used". Another prominent oil man says, "We can trace a large increase in our bulk oil sales to the merchandising of these drums".

Statements like these prove that the Pour-Ezee Drum is far more than just a good container. It is a *highly effective oil salesman.*

2. It Reduces Shipping Losses

The Pour-Ezee Drum ships without crating. It stacks for storage or shipment with the greatest economy of space.

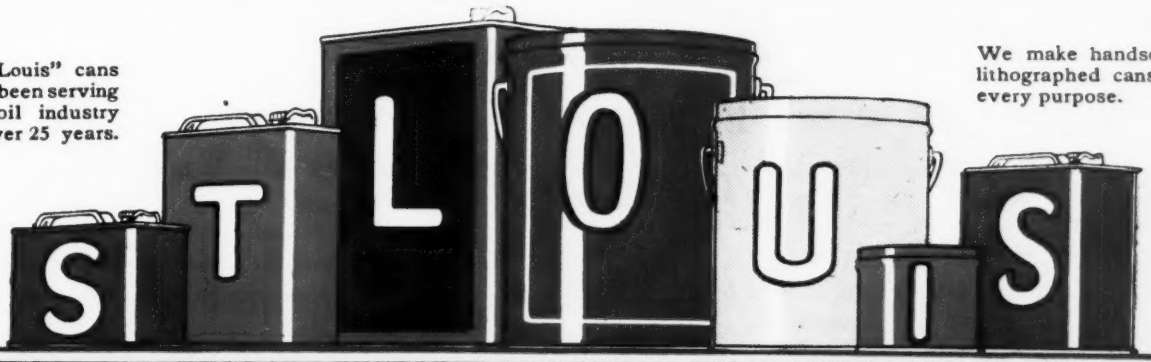
Letter after letter has come to us praising this feature of the Pour-Ezee, too. One man of long oil merchandising experience says, "I have not seen a more practical oil container in my entire experience. We have not had a single claim since making shipment in Pour-Ezee Drums. Furthermore, we save the time previously necessary to crate regular oil containers".

Write us for further evidence of what Pour-Ezee will do for you.

ST. LOUIS CAN CO., St. Louis, Mo.

"St. Louis" cans have been serving the oil industry for over 25 years.

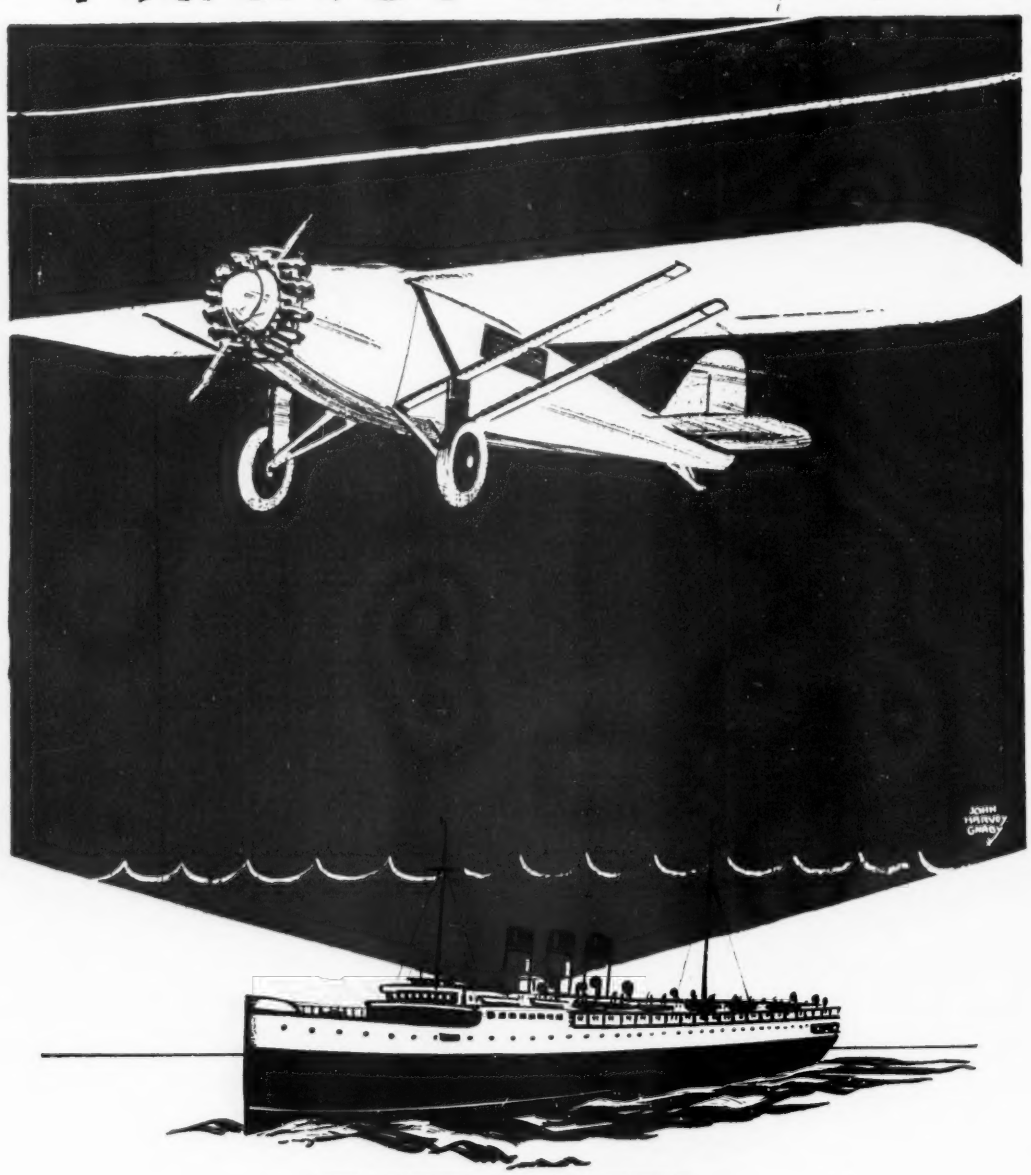
We make handsome, lithographed cans for every purpose.



St. Louis Can Company

POUR-EZEE DRUM

TRANSMIGRATION OF TRANSPORTATION



FLIERS KNOW

Air transport...new day travel...speeds that annihilate distance. Airplane motors demand a fuel of high volatility, quick starting and even burning.

The ideal aviation gasoline, as proven by exhaustive tests, is that carrying a high percentage of NATURAL GASOLINE, which furnishes the non-detonating, highly volatile, more powerful, even-burning elements to the fuel.

CHESTNUT & SMITH
CORPORATION

Tulsa, Oklahoma

A TANK CAR OR A TRAIN LOAD

SELL PLENTY OF GREASE *NOW!*

Every filling station can earn $5,000 yearly extra with Oil Grease Extractor

This improved machine cleans out old and gritty grease from transmission and rear axles in a very few minutes—makes it easy for you to refill them with fresh grease —enables you to boost your grease profits 1,000%.

It is not necessary to flush transmissions or housings before you remove the old grease. No matter what the weather—Summer or Winter—this powerful extractor removes the old grease quickly and visibly. You actually see the old grease coming out.

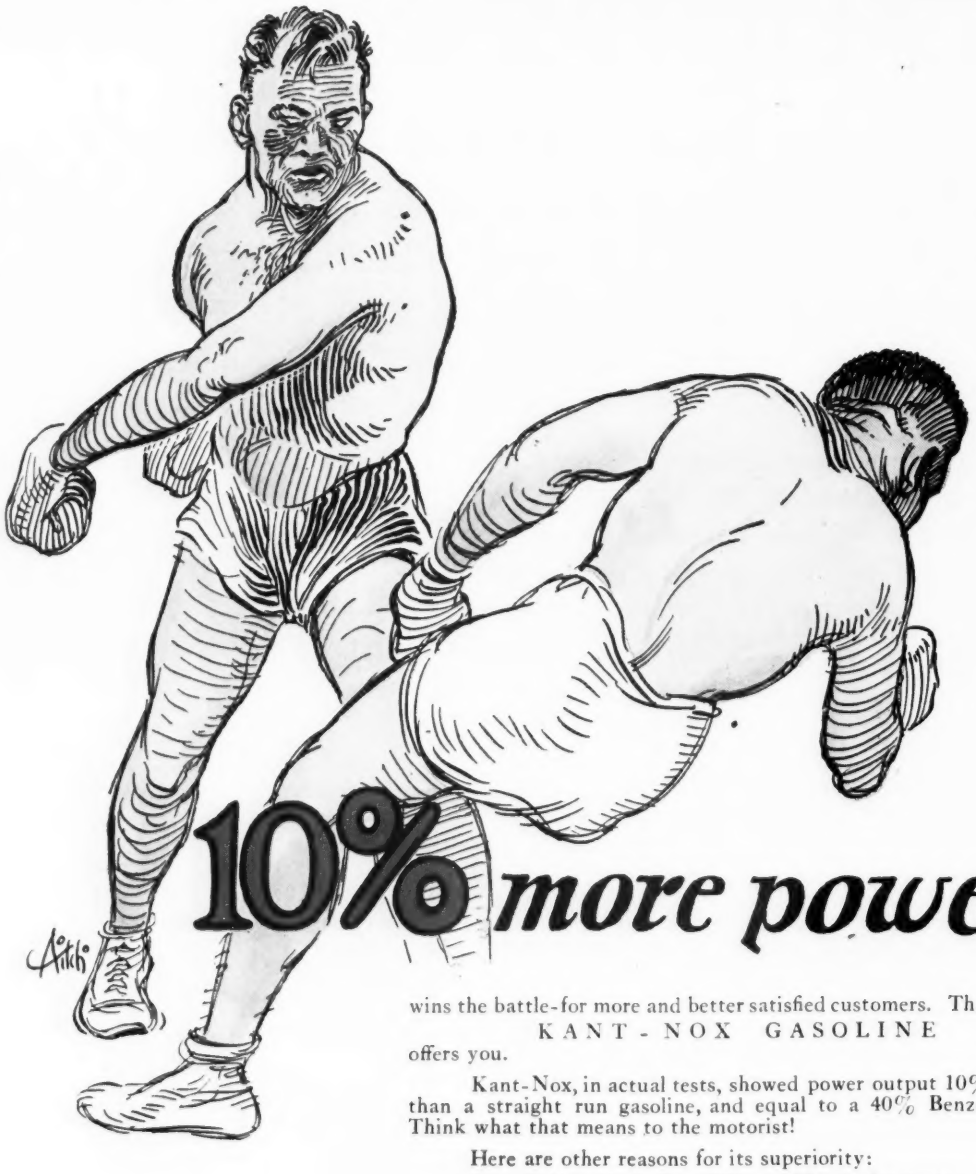
There are no motors or mechanisms to get out of order. The Oil Grease Extractor works anywhere, at any time, under any conditions. Suction nozzle is held tightly in place by a patented locking device. It is a one-man machine, and is hand operated. After the grease is removed, if you wish, you can flush the gears and housings with our simplified Cleanser and Sprayer giving each customer one quart of clean flushing oil.

Cleanser and Sprayer

It is the best spray on the market for washing and cleansing automobile, differential and transmission housings and gears — it is ideal for washing engine blocks, cleaning and lubricating springs. It has no valves — nothing to get out of order. This cleanser SPRAYS with great force—operates on any air chuck, weighs only 3½ pounds, and can be carried anywhere in one hand.

Make big money in your filling stations—giving your customers this service. Each car takes only a few minutes .... every minute means extra dollars of profit for you. Write TODAY for further information.

THE OIL GREASE PUMP COMPANY
LOCKLAND, OHIO



10% more power—

wins the battle-for more and better satisfied customers. That's what

KANT-NOX GASOLINE

offers you.

Kant-Nox, in actual tests, showed power output 10% greater than a straight run gasoline, and equal to a 40% Benzol blend. Think what that means to the motorist!

Here are other reasons for its superiority:

1st. It is made in four different blends, for Spring, Summer, Fall and Winter, thus assuring maximum mileage under all weather conditions.

2nd. Kant-Nox shows a gum content far below that of the average pressure gasoline.

3rd. Kant-Nox is filtered in the vapor phase, instead of being treated with acids. This accounts for its freedom from tarry compounds and its color stability; also for its high anti-knock value, in excess of 25% Benzol equivalent. Acid treatment removes a large percentage of the anti-knock compounds from ordinary pressure gasolines.

If you want more satisfied customers - sell them Kant-Nox, the premier Motor Fuel.

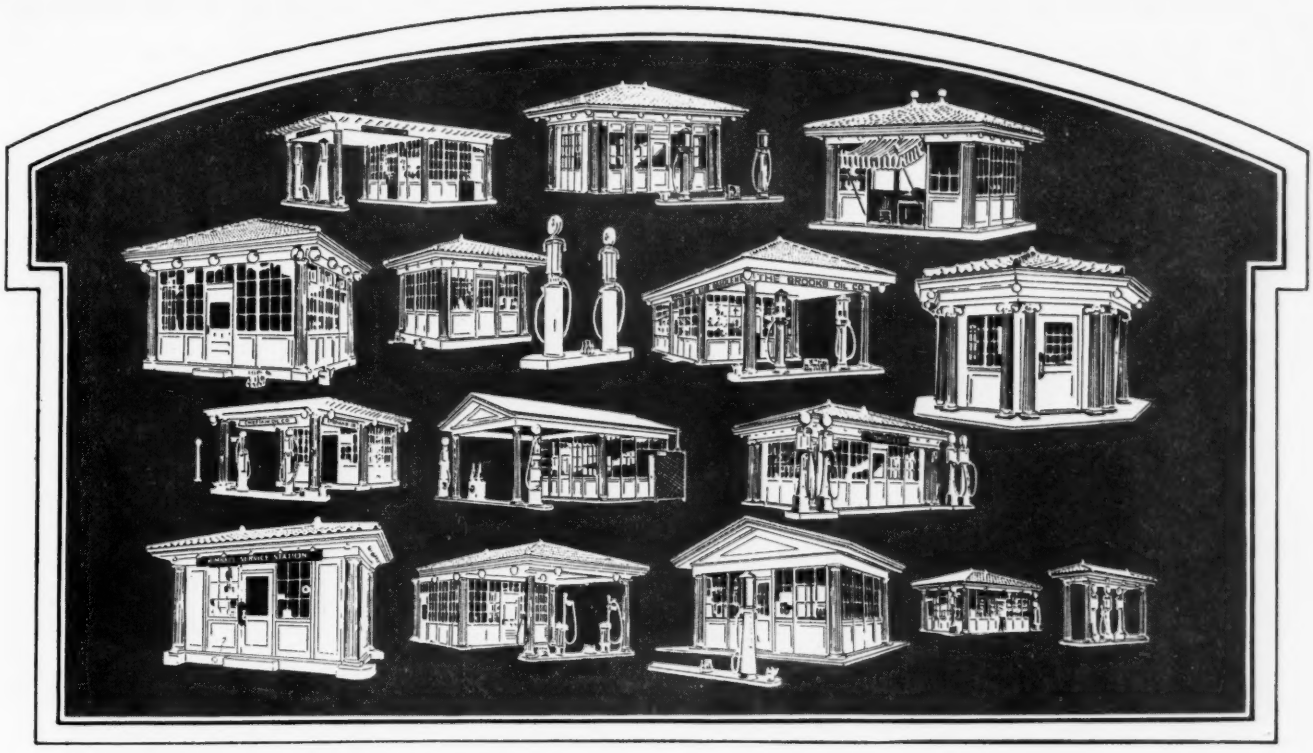
"There's a great future for the Kanotex jobber and dealer."

Write, wire or phone us for further information.

The Kanotex Refining Co.

Phone **Arkansas City** — *L. D. 4* **Kansas**

KANOTEX



14 Designs for 14 Different Requirements

WITH the continuous increase in ground rental values and the varying types of service to which filling stations are put, standardized buildings must be designed to fit certain localities and requirements.

That is why you will find fourteen different designs in the Union Metal Line—each fitting a particular type of service—each ornamental and complete. Moreover, Union Metal prices are right, deliveries are right, erection is speedy.

Before you place your order, send for the new Union Metal Catalog. In it you will find a size and type of station which will completely fit your requirements.

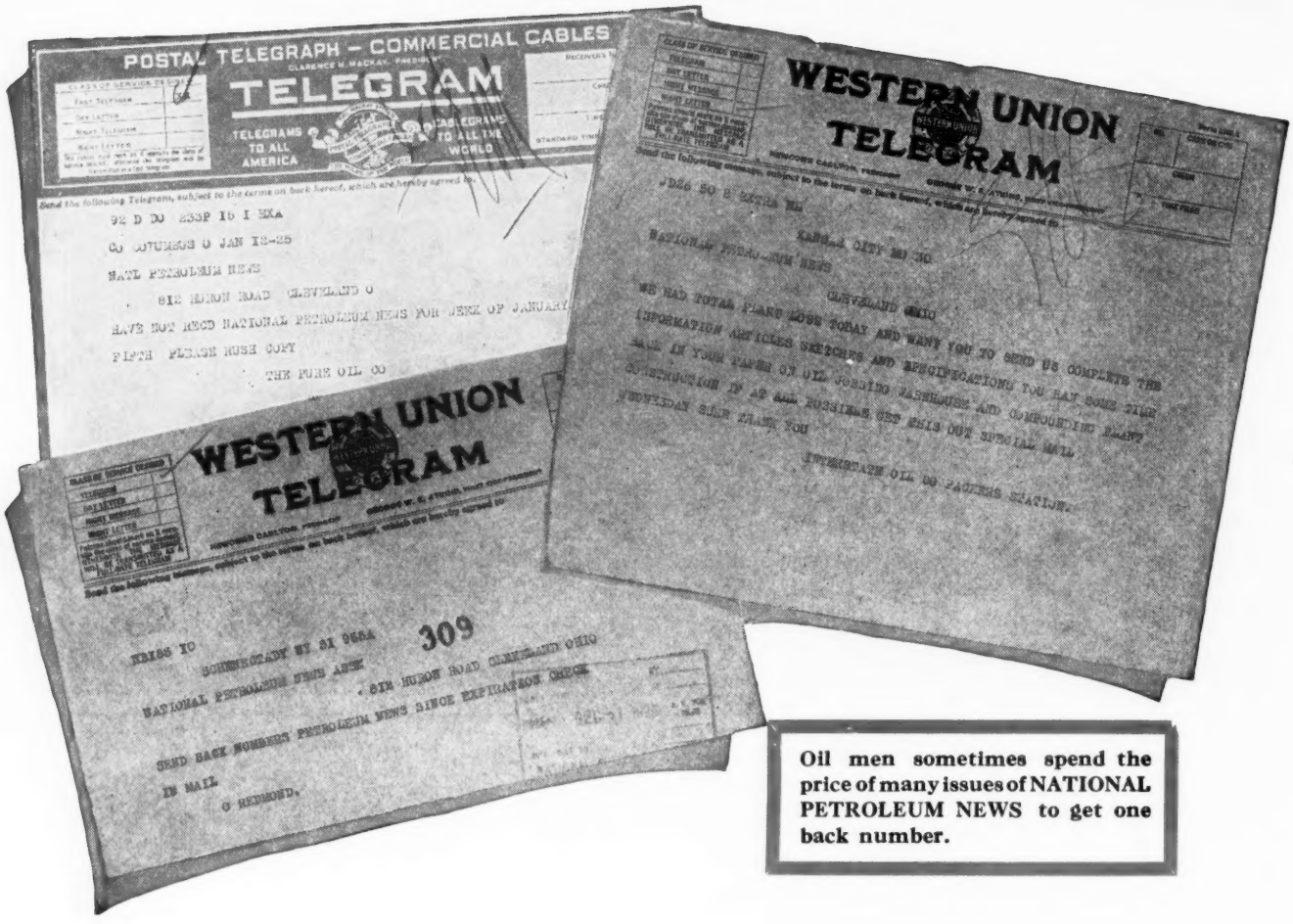
This catalog should be in the hands of every station operator. Send for your copy and check Union Metal specifications against your requirements.

THE UNION METAL MANUFACTURING COMPANY

General Offices and Factory, Canton, Ohio

Branches—New York, Chicago, Philadelphia, St. Louis, Los Angeles, San Francisco, Jacksonville

UNION METAL
ORNAMENTAL FILLING STATIONS



Oil men sometimes spend the price of many issues of NATIONAL PETROLEUM NEWS to get one back number.

They Burn the Wires for a Copy!

WHY? Because the news it contains must be timely and its information valuable to oil men in every division of the industry—producing, refining and marketing.

More oil men read ***National Petroleum News*** than any other oil paper.

Every reader pays for his subscription in advance. No other oil paper maintains a strictly paid-in-advance circulation. These facts prove this paper's news value.

Oil men want and need the accurate last-minute news and helpful counsel in ***National Petroleum News.***

If you are not sharing this outstanding oil paper value with 15,292 other oil men, join this big family of readers today.

Use This Coupon

National Petroleum News
975 Caxton Bldg., Cleveland, Ohio

I want to join the big family of National Petroleum News readers. Enter my order for 52 weeks. Enclosed is $3.50 (Foreign $5.)

NAME .....

Address ..... **City** .....

Division of industry engaged in .....

MODERN NATURAL GASOLINE

Modern refining practice has made NATURAL GASOLINE as easy to handle as ordinary gasoline.

It is refined down to give a high factor of safety and the quality of its different grades is rigidly maintained to the standard specifications.

NATURAL GASOLINE has become a tremendous factor in the building of modern motor fuel. A better understanding of its fuel factors is responsible for its continually increasing use by manufacturers and distributors of motor fuels.

A vast amount of information has been collected and classified by our bureau of research. These bulletins will gladly be sent on application to the Research Department, Association of Natural Gasoline Manufacturers, Cosden Building, Tulsa, Oklahoma.

RESEARCH DEPARTMENT OF THE

ASSOCIATION OF NATURAL GASOLINE MANUFACTURERS

Mack tanker, equipped with Budd Duals—one of a fleet operated by the Lindsay-McMillan Company

Here's the way to put delivery costs where they *should* be

"EACH of our trucks had to cover 250 miles a day—so we had to push them along fast," said a Pennsylvania fleet operator. "As a result, we had to get rid of a truck after a year of this grinding service—the wear and tear was so great.

"Then we changed to Budd-Michelin Dual Wheels—four years ago.

"Now we cover the same route in two-thirds the former time—and our trucks on Budd Duals are still going *after four years of service.*"

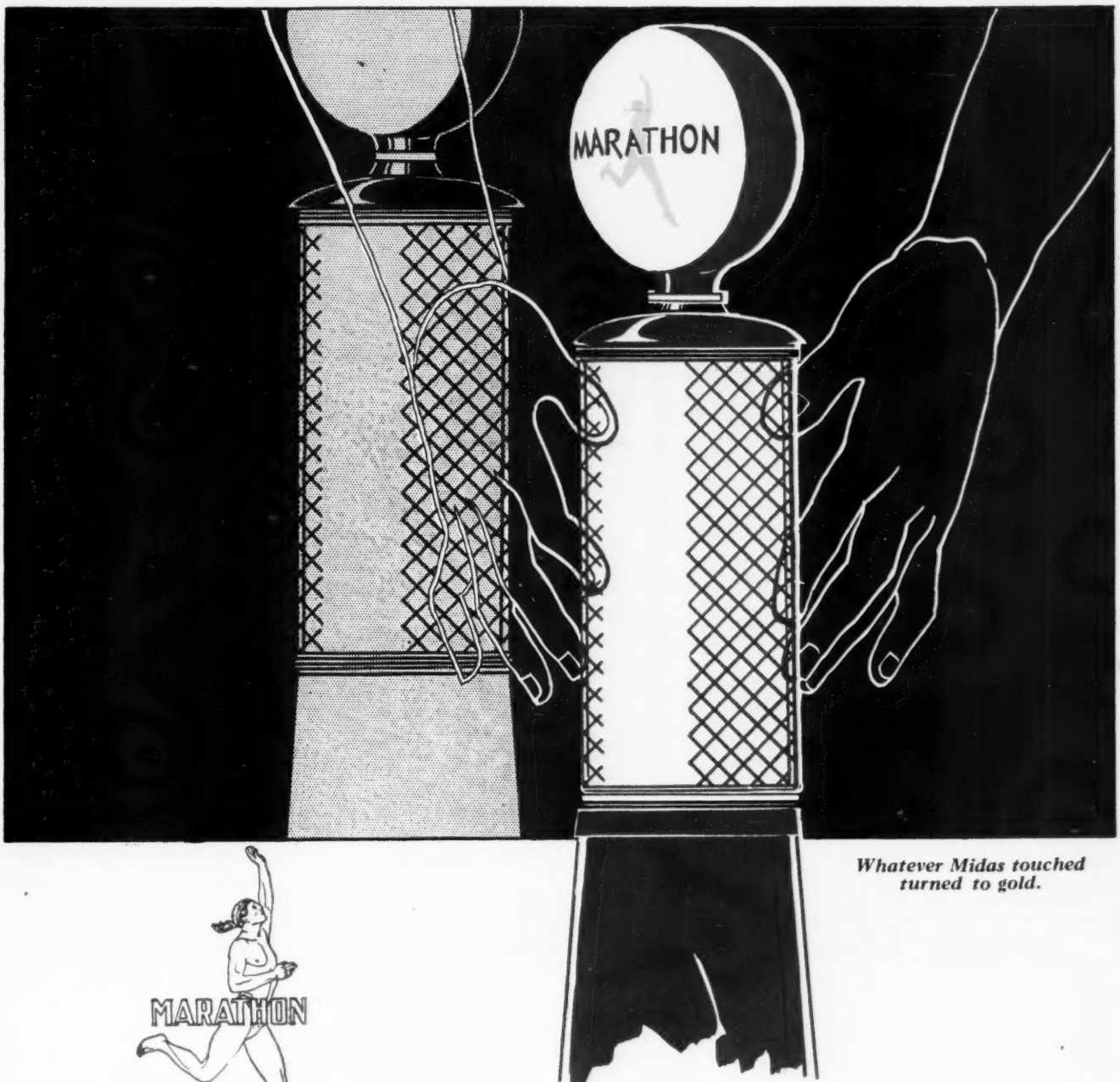
This tremendous saving in time and in the life of valuable hauling equipment is not an exceptional example. Truck operators from all parts of the country write us, telling how Budd Duals cut their repair bills, lower their maintenance costs, lengthen tire mileage, give more profitable speed . . .

If you haven't got your tankers on Budd Duals you aren't getting as much as you *could* for your delivery dollar.

YOU CAN GET BUDD DUALS on any make of truck. All manufacturers supply them, either as standard or as optional equipment. Your present trucks can be equipped with Duals, too. Ask your dealer, or write us.

BUDD
WHEEL COMPANY
Detroit

THE HANDS OF MIDAS



Whatever Midas touched turned to gold.

MARATHON PRODUCTS "BEST IN THE LONG RUN"

MARATHON products are offered to the jobber who knows that quality means profit.

MARATHON products are quality products. Our claims are not pretentious. We make only the simple statement based upon conviction "there is none better".

Put in a **MARATHON** pump at your station, and the hand of Midas will rest on it—satisfied patrons—greater patronage—just pride.

TRANSCONTINENTAL OIL CO.

Producers, Refiners, and Marketers of Marathon Quality Products

GENERAL OFFICES *Ritz Building* TULSA, OKLA.

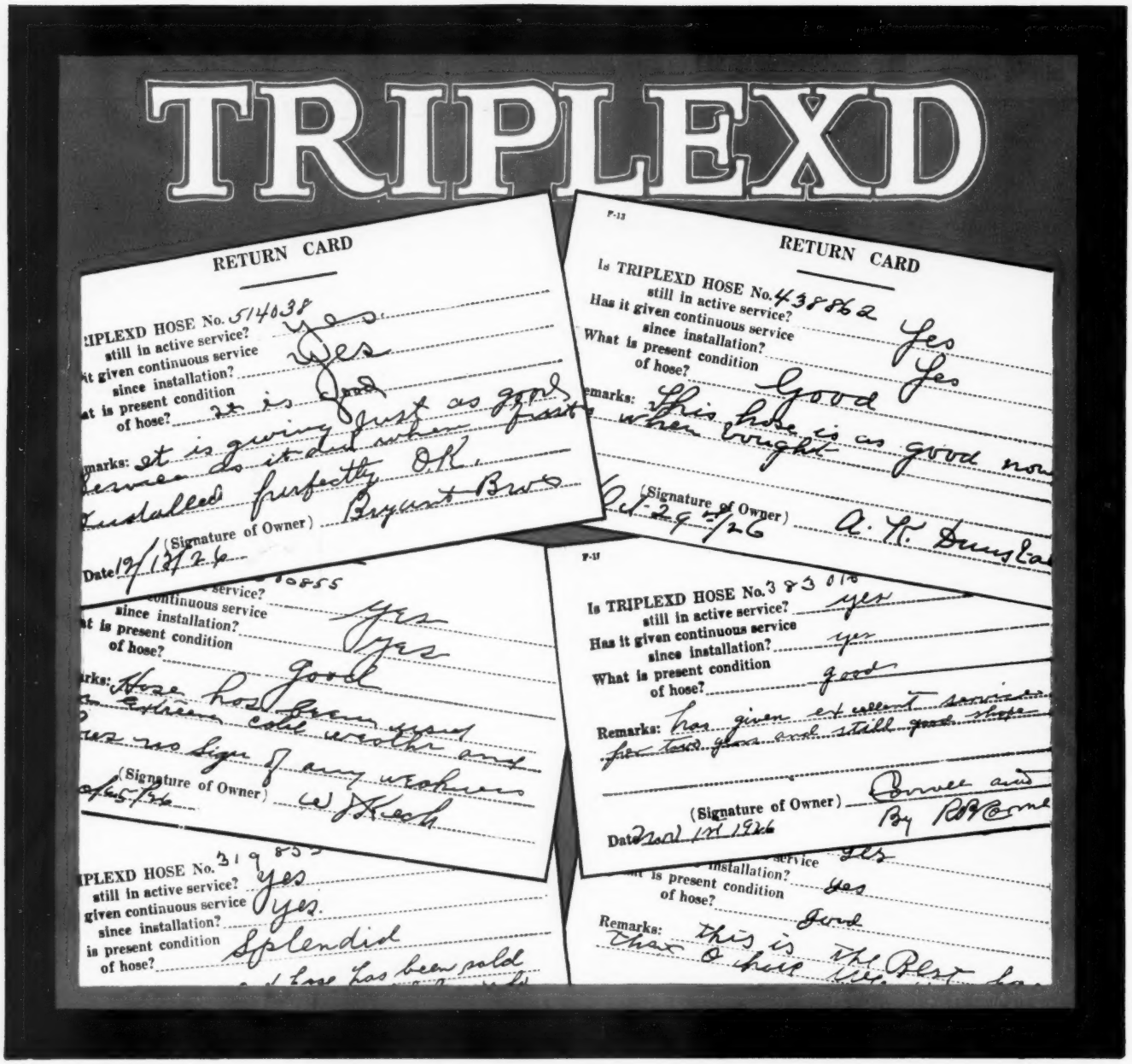
Sales Offices

Atlanta, Chicago, Little Rock, Fort Worth, Bristow, Pittsburgh, Sioux City

Refineries

Boynton, Bristow, Fort Worth

Warehouses at convenient shipping points.


TRIPLEXD
RETURN CARD
Is TRIPLEXD HOSE No. 514038 still in active service? Yes
Has it given continuous service since installation? Yes
What is present condition of hose? It is good
Remarks: It is giving just as good service as it did when first installed perfectly O.K.
(Signature of Owner) Bryant Bros
Date 12/13/26
RETURN CARD
Is TRIPLEXD HOSE No. 438862 still in active service? Yes
Has it given continuous service since installation? Yes
What is present condition of hose? Good
Remarks: This hose is as good now when bought
(Signature of Owner) A. K. Dunstan
Oct 29 1926
Is TRIPLEXD HOSE No. 10855 still in active service? yes
Has it given continuous service since installation? yes
What is present condition of hose? good
Remarks: Hose has been used for Extreme cold weather and there no sign of any weakness
(Signature of Owner) W. Keech
Dec 5 26
Is TRIPLEXD HOSE No. 383010 still in active service? yes
Has it given continuous service since installation? yes
What is present condition of hose? good
Remarks: has given excellent service for two years and still good shape
(Signature of Owner) Conner and
By R B Conner
Dec 2nd 1926
Is TRIPLEXD HOSE No. 31985 still in active service? yes
Has it given continuous service since installation? yes.
What is present condition of hose? Splendid
Remarks: This is the Best hose that we have ever sold

"Ask the man"—

The best way to check advertising claims is to get the opinion of the man that uses the product .... We have been telling you there is no other hose like Triplexd .... Thousands of return cards like those above are our authority.

METAL HOSE & TUBING CO.
INCORPORATED
236 Tillary Street
BROOKLYN, N.Y.

MEMPHIS: 245 Monroe Ave.
JACKSONVILLE: Dixie Culvert & Co.
ATLANTA: P. O. Box 1343
RICHMOND: P. O. Box 514
BROOKLYN: 236 Tillary St.
BOSTON: 142 Berkeley St.
PITTSBURGH: 341 Second Avenue
CLEVELAND: 1302 Ontario Street, North
CINCINNATI: 450 East Overland Street
DETROIT: 5459 Grand River Avenue
ST. LOUIS: 1621 Pine Street

KANSAS CITY: 13th Street and Eastern Ave
CHICAGO: 1213 West Washington Blvd.
SAN ANTONIO: 1401 South Flores Street
HOUSTON: 700 N. San Jacinto Street
EL PASO: 1020 East Pearl Street

NEW ORLEANS: 205 South Peters Street
MINNEAPOLIS: 900 Sixth Ave., S.E.
DENVER: 4800 York Street
SAN FRANCISCO: 873 Mills Building
LOS ANGELES: 1625 South Hill Street
SEATTLE: 67 Columbia St.
OMAHA: 13th and Willis Sts.
TORONTO, CAN.: Dunlop Tire & Rubber Goods Co., Ltd.
LONDON, ENG.: J. Bazley-White, 3 Love Lane, Eastcheap, E. C. 3